

Documents attached to September 23, 1999, comment letter from California Farm Bureau Federation (comment letter no. 1349)

- CALFED Ecosystem Restoration Program Proposed Land Acquisitions by Region (undated tables)
- Agricultural Lands Converted to Habitat (undated tables)
- The Agricultural Water Caucus Position on a Solution for the Bay-Delta (July 8, 1998)
- Commitment to Conservation
- Draft - CALFED Bay-Delta Program Multi-Species Conservation Strategy Proposed Assurances for Cooperating Landowners, Local Agencies, and Other Private Entities

EXHIBIT B

C-096776

**CALFED ECOSYSTEM RESTORATION PROGRAM
PROPOSED LAND ACQUISITIONS BY REGION
San Joaquin Valley Region**

Habitat Type	Table 4-2	San Joaquin Region [290 miles of San Joaquin Valley]	East San Joaquin Zone [Lower Stanislaus Riv., Tuolumne Riv., Merced Riv.]	West San Joaquin Zone [Eastern Slope of Coast Range and portions of Central Valley]
Tidal Perennial Aquatic				
Tidal Perennial Aquatic (shoals)				
Non-tidal Perennial Aquatic	1,000			1,000
Tidal Sloughs				
Mid Channel Island				
Fresh Emergent Wetland (tidal)				
Fresh Emergent Wetland (non-tidal)				
Seasonal Wetland		52,500 + 120,300		
Riparian	700 – 1,300	50 miles		500 – 1,000
Saline Emergent Wetland (tidal)				
Stream Meander	1,500 – 2,000		1,000	10-24 miles (which includes Channel, meander, flood plain processes)
Perennial Grassland				
Agricultural Lands		15,290		Manage contaminants on 20,000
TOTALS:	3,200 – 4,300	67,790 – 135,590 + 50 miles	1,000	22,500

Habitat Restoration Plan = 91,290 to 159,090 plus 50 miles

SACRAMENTO RIVER REGION (page 1)

Habitat Type	Sac. River Zone [Includes the area from Keswick Dam near Redding, to the American River] Note: the lower 60 miles of river are in the N. Delta Mgmt. Zone	North Sac. Valley Zone [Includes the tributary streams around Redding: Cow Cr. Bear Cr. Butte Cr. Clear Cr.]	Cottonwood Basin [Located between Red Bluff and Redding] This basin is tributary to Sac. River.	Colusa Basin [This basin includes the following Sac. River tributaries: Elder Cr. Stony Cr. Colusa Basin Thomes Cr.]	Butte Basin [Includes Sac. River tributaries around Red Bluff: Deer Cr. Butte Cr. Big Chino Butte Sink Mill Cr. Antelope Cr. Paynes Cr.]
Tidal Perennial Aquatic					
Tidal Perennial Aquatic (shoals)					
Non-tidal Perennial Aquatic					
Tidal Sloughs					
Mid Channel Island					
Fresh Emergent Wetland (tidal)					
Fresh Emergent Wetland (non-tidal)					
Seasonal Wetland				2,000 + 26,435	10,000 26,150
Riparian			130 miles - continuous stretch		20 miles
Saline Emergent Wetland (tidal)					
Stream Meander	8,000 – 12,000 +8,000 – 12,000	8 miles (e.g., the lower 8 miles of Clear Cr.)	Restore flood plain in lower 20 miles of Cottonwood Basin		
Perennial Grassland					
Agricultural Lands				111,285	108,832
TOTALS:	16,000 – 24,000	8 miles	150 miles	139,720	144,982 + 20 miles

SACRAMENTO RIVER REGION (page 2)

Habitat Type	Yolo Basin	Feather/ Sutter Basin	American Basin	Table 4-2
Tidal Perennial Aquatic				
Tidal Perennial Aquatic (shoals)				
Non-tidal Perennial Aquatic				
Tidal Sloughs				
Mid Channel Island				
Fresh Emergent Wetland (tidal)				
Fresh Emergent Wetland (non-tidal)				
Seasonal Wetland		500 + 3,090	5,150	
Riparian				6,500 – 7,000
Saline Emergent Wetland (tidal)				
Stream Meander		1,000		19,000 – 27,000
Perennial Grassland				
Agricultural Lands		57,578	20,948	
TOTALS:		62,168	26,098	25,500 – 34,000

Sacramento River Total = 414,468 to 430,968 acres **PLUS** 178 Miles

DELTA

Habitat Type	Eastside Delta	Table 4-2	Sacramento/San Joaquin Delta
Tidal Perennial Aquatic		7,000	See attached Table 4 from Ecosystem Restoration Plan
Tidal Perennial Aquatic (shoals)		500	
Non-tidal Perennial Aquatic		2,600	
Tidal Sloughs		600 – 1,200	
Mid Channel Island		200 – 800	
Fresh Emergent Wetland (tidal)		30,000 – 45,000	
Fresh Emergent Wetland (non-tidal)		14,500 – 17,000	
Seasonal Wetland		30,000	
Riparian		1,000 – 1,500	
Saline Emergent Wetland (tidal)			
Stream Meander			
Perennial Grassland		4,000 – 6,000	
Agricultural Lands			
TOTALS:	3,720	90,400 – 111,600	

Totals

Habitat Plan – 142,570 to 195,720 PLUS 143 – 220 miles

**Summary of ERPP Habitat Restoration Targets and Programmatic Actions
for the Sacramento-San Joaquin Delta Ecological Management Zone**

Habitat Type	North Delta Acreage	East Delta Acreage	South Delta Acreage	Central and West Delta Acreage	Total Acreage
Tidal Perennial Aquatic	1,500	1,000	2,000	2,500	7,000
Shoal	0	0	0	500	500*
Nontidal Perennial Aquatic (deep open water)	0	200	200	100	500
Nontidal Perennial Aquatic (shallow open water)	1,000	300	300	500	2,100
Delta Sloughs (short-term)	10 miles	10 miles	25 miles	20 miles	65 miles*
Delta Sloughs (long-term)	Additional 20 miles	Additional 20 miles	Additional 25 miles	Additional 30 miles	Additional 95 miles*
Midchannel Islands	50 to 200	50 to 200	50 to 200	50 to 200	200 to 800*
Fresh Emergent Wetland (tidal)	TBD [to be determined]	TBD	TBD	TBD	30,000 to 45,000
Fresh Emergent Wetland (nontidal)	3,000	3,000	4,000	10,000	20,000
Seasonal Wetland	Improve: 1,000 Restore: 4,000	1,000 6,000	500 12,000	1,500 8,000	4,000 30,000
Riparian and Riverine Aquatic	10-15 miles plus 500 acres	8-15 miles	25-25 miles		43-55 miles plus 500 acres
Inland Dune Scrub	0	0	0	50 to 100	50 to 10*
Perennial Grassland	1,000	1,000	1,000 to 2,000	1,000 to 2,000	4,000 to 6,000
Wildlife Friendly Agricultural Land	TBD	TBD	TBD	TBD	40,000 to 75,000
Total acres of all habitats to be restored include large acreage that will have minimal impacts on existing land uses such as wildlife friendly agricultural practices, shoal habitat, and inland dune scrub. The largest acreages are for shallow water habitats such as fresh emergent wetlands (tidal and nontidal) and tidal perennial aquatic habitats. Those three total 57000-72,000 acres					138,350 to 191,000
Total Delta Slough/Riparian and Riverine Aquatic Habitats includes miles of habitat to be improved and an expansion of Stone Lakes and Cosumnes River Preserve by 500 acres					143-220 miles plus 500 acres

*Denotes acreages that have minimal impact to existing agricultural land uses and practices.

Table 4. Summary of ERPP Habitat Restoration Targets and Programmatic Actions for the Sacramento-San Joaquin Delta Ecological Management Zone.

Habitat Type	North Delta Acreage	East Delta Acreage	South Delta Acreage	Central and West Delta Acreage	Total Acreage
Tidal Perennial Aquatic	1,500	1,000	2,000	2,500	7,000
Shoal	0	0	0	500	500*
Nontidal Perennial Aquatic (deep open water)	0	200	200	100	500
Nontidal Perennial Aquatic (shallow open water)	1,000	300	300	500	2,100
Delta Sloughs (short- term)	10 miles	10 miles	25 miles	20 miles	65 miles*
Delta Sloughs (long- term)	Additional 20 miles	Additional 20 miles	Additional 25 miles	Additional 30 miles	Additional 95 miles*
Midchannel Islands	50 to 200	50 to 200	50 to 200	50 to 200	200 to 800*
Fresh Emergent Wetland (tidal)	TBD [to be determined]	TBD	TBD	TBD	30,000 to 45,000
Fresh Emergent Wetland (nontidal)	3,000	3,000	4,000	10,000	20,000
Seasonal Wetland	Improve: 1,000 Restore: 4,000	1,000 6,000	500 12,000	1,500 8,000	4,000 30,000
Riparian and Riverine Aquatic	10-15 miles plus 500 acres	8-15 miles	25-25 miles		43-55 miles plus 500 acres
Inland Dune Scrub	0	0	0	50 to 100	50 to 100*
Perennial Grassland	1,000	1,000	1,000 to 2,000	1,000 to 2,000	4,000 to 6,000
Wildlife Friendly Agricultural Land	TBD	TBD	TBD	TBD	40,000 to 75,000*
Total acres of all habitats to be restored include large acreages that will have minimal impacts on existing land uses such as wildlife friendly agricultural practices, shoal habitat, and inland dune scrub. The largest acreages are for shallow water habitats such as fresh emergent wetlands (tidal and nontidal) and tidal perennial aquatic habitats. Those three total 57,000-72,000 acres.					138,350 to 191,000
Total Delta Slough /Riparian and Riverine Aquatic Habitats includes miles of habitat to be improved and an expansion of Stone Lakes and Cosumnes River Preserve by 500 acres.					143-220 miles plus 500 acres

* Denotes acreages that have minimal impact to existing agricultural land uses and practices.

BAY REGION
Summary of ERPP Habitat Restoration Targets and Programmatic Actions for the
Suisun Marsh/North San Francisco Bay Ecological Management Zone

Habitat Type	Suisun Bay and Marsh	Napa River	Sonoma Creek	Petaluma River	San Pablo Bay	Total
Tidal Perennial Aquatic	1,500	0	0	0	Feasibility study	1,500 acres
Nontidal Perennial Aquatic (deep, open water)	400	400	400	400	0	1,600 acres
Tidal Sloughs (short-term)	5 miles	10 miles	10 miles	10 miles	0	35 miles
Tidal Sloughs (long-term)	Additional 5 miles	Additional 10 miles	Additional 10 miles	Additional 10 miles	0	35 miles
Saline Emergent Wetland (restore)	5,000 -7,000	1,000-2,000	500-1,000	500-1,000	500-1,000	7,500-12,000 acres
Saline Emergent Wetland (protect)	to be determined (TBD)	TBD	TBD	TBD	TBD	6,200 acres
Seasonal Wetland (Protect existing)	40,000 – 50,000	0	0	0	0	40,000-50,000 acres
Seasonal Wetland (Restore)	1,000-1,500	0	0	0	0	1,000-1,500 acres
Vernal Pools	100	0	0	0	0	100 acres
Vernal Pool Buffer Area	500-1,000	0	0	0	0	500-1,000 acres
Riparian and Riverine Aquatic	10-15 miles	10-15 miles	10-15 miles	10-15 miles	10-15 miles	50-75 miles
Total acres of all habitats to be restored include tidal perennial, nontidal perennial saline emergent wetland, seasonal wetland, vernal pool and vernal pool buffer, and perennial grassland.						17,200-22,700 acres
Total acres of existing habitats to be protected and enhanced						46,200-56,200 acres
Total miles of tidal sloughs to be restored						70 miles
Total miles of riparian and riverine aquatic habitat to be restored						50-75 miles

Table 4-2 = 15,040 to 19,880 acres
Habitat Plan total = 63,400 to 78,900 acres
PLUS 120 – 145 miles

BAY REGION

Table 5: Summary of ERPP Habitat Restoration Targets and Programmatic Actions for the Suisun Marsh/ North San Francisco Bay Ecological Management Zone.

Habitat Type	Suisun Bay and Marsh	Napa River	Sonoma Creek	Petaluma River	San Pablo Bay	Total
Tidal Perennial Aquatic	1,500	0	0	0	Feasibility study	1,500 acres
Nontidal Perennial Aquatic (deep, open water)	400	400	400	400	0	1,600 acres
Tidal Sloughs (short-term)	5 miles	10 miles	10 miles	10 miles	0	35 miles
Tidal Sloughs (long-term)	Additional 5 miles	Additional 10 miles	Additional 10 miles	Additional 10 miles	0	35 miles
Saline Emergent Wetland (restore)	5,000-7,000	1,000-2,000	500-1,000	500-1,000	500-1,000	7,500 -12,000 acres
Saline Emergent Wetland (protect)	to be determined (TBD)	TBD	TBD	TBD	TBD	6,200 acres
Seasonal Wetland (Protect existing)	40,000-50,000	0	0	0	0	40,000-50,000 acres
Seasonal Wetland (Restore)	1,000-1,500	0	0	0	0	1,000-1,500 acres
Vernal Pools	100	0	0	0	0	100 acres
Vernal Pool Buffer Area	500-1,000	0	0	0	0	500-1,000 acres
Riparian and Riverine Aquatic	10-15 miles	10-15 miles	10-15 miles	10-15 miles	10-15 miles	50-75 miles
Perennial Grassland	1,000	1,000	1,000	1,000	1,000	5,000 acres
Total acres of all habitats to be restored include tidal perennial, nontidal perennial saline emergent wetland, seasonal wetland, vernal pool and vernal pool buffer, and perennial grassland.						17,200-22,700 acres
Total acres of existing habitats to be protected and enhanced						46,200-56,200 acres
Total miles of tidal sloughs to be restored						70 miles
Total miles of riparian and riverine aquatic habitat to be restored						50-75 miles

Table 4-2 = 15,040 to 19,880 acres
Habitat Plan total = 63,400 to 78,900 acres
PLUS 120 - 145 miles

EXHIBIT C

C — 0 9 6 7 8 5

Agricultural lands converted to habitat:

CALFED No.	Project Description	Applicant	Geographic Area	CALFED Approved Funding	Funding Source	Acres
99-R01	Floodplain Easements, Lower Tuolumne and San Joaquin	NRCS	San Joaquin River	\$1,545,000	Bay-Delta Act	1200
98-B13	Napa River Wetlands acquisition	Napa County Land Trust	Northbay	\$1,000,000	Bay-Delta Act	958
98-F14	South Napa River Wetlands Acquisition and Restoration Program	Napa County Land Trust	Northbay	\$431,000	Bay-Delta Act	600
98-F18	Floodplain Acquisition, Management, and Monitoring on the Sacramento River	The Nature Conservancy, Wildlife Conservation Board, and others.	Sacramento Mainstem	\$1,000,000	Bay-Delta Act	500
98-C05	Basso Bridge land acquisition	DFG	Tuolumne River	\$172,500	Proposition 204	318
98-F21	Lower San Joaquin River Floodplain Protection and Restoration Project	USFWS, San Luis National Wildlife Refuge	San Joaquin River	\$1,100,000	Bay-Delta Act	303
98-F13	Petaluma Marsh Expansion Project - Marin County	Marin Audubon Society	Northbay	\$352,135	Bay-Delta Act	181
98-M14	Clear Creek - Property Acquisition	Western Shasta RCD	Clear Creek	\$211,000	CLWA	120
97-N04	Sacramento River meander restoration	The Nature Conservancy	Sacramento Mainstem	\$898,700	Proposition 204	95
98-F03	Butte Creek acquisition and riparian restoration	CSU, Chico	Butte Creek	\$125,000	Bay-Delta Act	80
98-F15	Lower Clear Creek Floodway Restoration Project	Western Shasta Resource Conservation District	Clear Creek	\$3,559,556	Bay-Delta Act	70
98-C04	Merced River Ranch acquisition and restoration	DFG	Merced River	\$658,000	Proposition 204	42
97-N12	Franks Tract restoration	Moffat and Nichol Engineers, DPR, DWR	Delta	\$231,500	Proposition 204	40
98-E08	Cold Water Fisheries and Water Quality Element	City of San Jose-Environmental Services Department	Other	\$200,000	Bay-Delta Act and EPA Watershed Funds	16
97-N13	Tyler Island levee protection and habitat restoration pilot project	Habitat Assessment & Restoration Team, Inc	Delta	\$885,202	Proposition 204	6
97-N08	Lower Mill Creek riparian restoration	Mill Creek Conservancy, The Nature Conservancy	Mill Creek	\$69,000	Proposition 204	3

Lands where all or part are maintained in existing agricultural use – farmed or grazed:

CALFED No.	Project Description	Applicant	Geographic Area	CALFED Approved Funding	Funding Source	Acres
97-B04	Acquisition and restoration of Refuge lands (SJR NWR)	USFWS	San Joaquin Mainstem	\$10,847,000	Bay-Delta Act	6169
97-B03	Liberty Island acquisition	USFWS	Delta	\$8,577,000	Bay-Delta Act	4760
98-M06	Cosumnes River Preserve (Valensin Ranch Acquisition)	The Nature Conservancy	Cosumnes River	\$1,500,000	CLAWA	3300
98-F20	Deer and Mill Creeks Acquisition and Enhancement	The Nature Conservancy	Deer, Mill Creeks	\$1,000,000	Bay-Delta Act	2500
98-B17	Cosumnes floodplain acquisition and restoration	The Nature Conservancy	Cosumnes River	\$3,500,000	Bay-Delta Act	2256
98-B12	Riparian Corridor Acquisition and Restoration	USBLM	Battle Creek	\$2,200,000	Bay-Delta Act	1920
98-F04	McCormack-Wilkinson Tract Acquisition	The Nature Conservancy	Delta	\$5,250,000	Bay-Delta Act	1655
98-F12	Stone Lakes NWR Land Acquisitions	USFWS	Delta	\$1,900,000	Bay-Delta Act	658
98-F07	Grayson River Ranch Perpetual Easement and Restoration	East Stanislaus RCD and Friends of the Tuolumne	Tuolumne River	\$732,000	Bay-Delta Act	140

Existing habitat or restoration of public lands or existing degraded habitat – no land use change:

CALFED No.	Project Description	Applicant	Geographic Area	CALFED Approved Funding	Funding Source	Acres
97-N18	Cullinan Ranch restoration	Ducks Unlimited, Inc.	North Bay	\$368,500	Proposition 204	1465
97-B05	Bear Creek floodplain restoration demonstration project (SLNWR)	USFWS	San Joaquin River	\$334,000	Bay-Delta Act	1326
98-F19	Cosumnes River Acquisition, Restoration Planning and Demonstration	The Nature Conservancy	Cosumnes River	\$750,000	Bay-Delta Act	800
97-N10	Jepson Prairie restoration and conservation plan	Solano County Farmlands, Open Space Foundation	Delta	\$244,801	Proposition 204	600
98-F23	South Napa River Tidal Slough and Floodplain Restoration Project	City of American Canyon	Northbay	\$1,455,000	Bay-Delta Act	519
97-N19	Tolay Creek restoration	Ducks Unlimited, Inc.	North Bay	\$283,000	Proposition 204	312
97-N03A	Sacramento River acquisition and riparian forest restoration	USFWS, The Nature Conservancy	Sacramento Mainstem	\$780,000	Proposition 204	300
98-F22	Biological Restoration and Monitoring in the Suisun Marsh/North San Francisco Bay Ecological Zone	CSU, Hayward	Suisun Marsh	\$772,667	Bay-Delta Act	272
98-F16	Fern-Headreach Tidal Perennial Aquatic and Shaded River Aquatic Conservation Project	Thomas Luckey (L & L Farms, LLC)	Delta	\$425,000	Bay-Delta Act	168
97-N06	Butte Creek acquisition and riparian restoration	CSU, Chico	Butte Creek	\$187,128	Proposition 204	90
98-F10	Nelson Slough Wildlife Area Restoration Demonstration Project	DFG	Feather River	\$256,476	Bay-Delta Act	85
98-F04	Lower Mill Creek riparian restoration	Mill Creek Conservancy, The Nature Conservancy	Mill Creek	\$29,730	Bay-Delta Act	74
98-F08	Rhode Island Floodplain Management and Habitat Restoration	DFG	Delta	\$25,000	Bay-Delta Act	67
97-N16	Bay Point Shoreline Restoration Plan	East Bay Regional Park District	East Bay	\$185,000	Proposition 204	52
98-B08	Cache Slough habitat enhancement	RD No. 2060	Delta	\$85,000	Bay-Delta Act	9
98-F17	Benicia Waterfront Marsh Restoration	City of Benicia	Suisun Marsh	\$58,000	Bay-Delta Act	8

ADDS PROJECTS

Commodity/Species Orientation --- Issue/Discipline Orientation --- Clientele Orientation --- Supporting Projects

Commodity/Species Orientation:

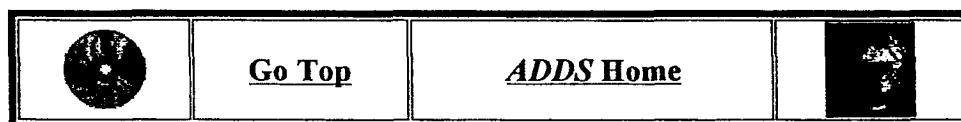
Alfalfa	<u>National Alfalfa Information Database (NAID)</u>
Beef	<u>National Beef Database (NBD)</u>
Catfish	<u>National Catfish Information Database (NCID)</u>
Dairy	<u>National Dairy Database (NDD)</u>
Goat	<u>National Goat Database (NGD)</u>
Pig	<u>National Pig Information Database (NPID)</u>
Poultry	<u>National Poultry Database (NPD)</u>
Sheep	<u>National Sheep Database (NSHD)</u>

Issue/Discipline Orientation:

Software	<u>Agriculture and Natural Resources Software Inventory (ANRSI)</u>
Residues	<u>Food Animal Residue Avoidance Databank (FARAD)</u>
Manure	<u>National Animal Manure Management Project (NAMM)</u>

Clientele Orientation:

No clientele-oriented projects yet established.



Modified March 8, 1999 -  - beastwood@reeusda.gov

EXHIBIT D

C - 0 9 6 7 9 0

The Agricultural Water Caucus Position on a Solution for the Bay-Delta

Updated: July 8, 1998

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EXECUTIVE SUMMARY

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AGRICULTURE'S ROLE IN CALIFORNIA'S FUTURE

THE AG WATER CAUCUS POSITION ON THE CALFED PROGRAM

POSITIONS AND RECOMMENDED CALFED ACTIONS ON SPECIFIC ISSUES

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2. ISSUE – AGRICULTURAL LAND/WATER CONVERSION AND RETIREMENT

3. ISSUE – CALFED WATER CONVEYANCE ALTERNATIVES

4. ISSUE – CALFED COMMON PROGRAMS

5. ISSUE – WATER USE EFFICIENCY

6. ISSUE – WATER QUALITY AND WATERSHED MANAGEMENT

7. ISSUE – WATER TRANSFERS

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LIST OF AG WATER CAUCUS ORGANIZATIONS

Executive Summary

The Agricultural Water Caucus is an informal coalition of agricultural production organizations, water suppliers and users from throughout California.

In large part, California's economic and ecological health depends upon the capacity of the Delta and its watersheds to meet the needs of water users and the environment. Following is an executive summary of a white paper developed by the Ag Water Caucus that examines the CALFED Bay-Delta Program's proposals for resolving conflicts in the Delta, and outlines the position of California agriculture on these proposals. A complete copy of this white paper, which includes recommendations to improve CALFED's proposals from the agricultural perspective, is available from any member of the Ag Water Caucus.

A complete list of organizations and individuals that worked to develop this white paper is located at the end of the document.

The Ag Water Caucus Position on the CALFED Program

The CALFED Bay-Delta Program must recognize existing agricultural surface and ground water rights and area of origin rights, as well as existing contractual obligations of the state and federal governments. New water demands (for urban growth and environmental uses) must look to newly developed water supplies. The Ag Water Caucus strongly objects to any effort to require agricultural water users to pay any additional costs to replace water taken for environmental uses through regulatory actions, or for replacing water dedicated to environmental protection by legislative actions and the Bay-Delta Accord.

A primary benefit of the CALFED Program for agriculture is development of an adequate, affordable and reliable water supply. Water supply reliability must be defined as the timely delivery of water adequate to sustain crops. The Ag Water Caucus does not accept the position of certain stakeholders that "less water delivered more often" is consistent with the CALFED solution principles.

The Ag Water Caucus strongly supports near-term incremental implementation of the CALFED program, with early investments in system capacity where there is a potential for significant benefit to both water users and the environment.

1. Issue - Water Supply and Storage

POSITION: The Ag Water Caucus strongly asserts that additional water storage capacity must be part of CALFED's common programs rather than variable options.

RECOMMENDED CALFED ACTION: Additional surface storage should be moved from variable options to the suite of CALFED common programs. CALFED's storage proposals should directly address the effect of such storage options on water yield, power consumption versus power production, flood control benefits, and opportunity for multiple benefits in the use of increased yield. CALFED should construct new surface storage in the Sacramento Valley, adjacent to the Delta and in the San Joaquin Valley. Groundwater management programs must be developed on the local level and be supported by local affected groundwater users and communities; a "one-size-fits-all" approach will not work in all basins or sub-basins.

2. Issue - Agricultural Land/Water Conversion and Retirement

POSITION: The Ag Water Caucus opposes the widespread conversion of agricultural land and its associated water resources to other uses. While some locally driven, voluntary programs that address specific issues may have merit, widespread land retirement and/or conversion is unacceptable. Land and water conversion in most cases violates CALFED's solution principles. Land conversion does not allow agriculture to move forward with other stakeholders. Local efforts to address water quality should take precedence over land retirement proposals. CALFED common programs should emphasize use of public lands as well as protect neighboring landowners. Land retirement for demand reduction purposes was eliminated from further discussion at the end of Phase 1, and must remain "off the table."

RECOMMENDED CALFED ACTION: CALFED should structure the Ecosystem Restoration Program to avoid, reduce or mitigate potential impacts to agricultural water and land resources. The program should develop an approach that emphasizes collaborative local projects with landowners. CALFED should assist local agencies in enhancing water quality through means other than land retirement. CALFED should also evaluate its common programs and give precedence to measures that maintain lands in private ownership and agricultural operations.

3. Issue - CALFED Water Conveyance Alternatives

POSITION: The Ag Water Caucus strongly asserts that improved conveyance is essential to meet the CALFED water supply reliability, water quality, flood control and fishery objectives. The Ag Water Caucus maintains that the minor improvements identified in Alternative 1 are inadequate to meet these objectives. Further refinement and optimization of Alternatives 2 and 3 are necessary to determine if each can accomplish acceptable levels of improvement. The Ag Water Caucus also believes that such improvements are only effective if linked with additional storage.

RECOMMENDED CALFED ACTION: CALFED must perform additional analyses to address the relative weaknesses associated with Alternatives 2 and 3, and try to optimize each of these alternatives to determine if each can accomplish acceptable levels of improvement in all solution areas. This analysis must include development of operating criteria and assurances that provide fishery protection, and address water supply reliability, in-Delta and export water quality, earthquake risk, and flood control.

4. Issue - CALFED Common Programs

POSITION: The Ag Water Caucus supports revisions to the common programs in order to maintain land in private ownership and agricultural production. In addition, the common programs should provide incentives for landowners to participate in program objectives.

RECOMMENDED CALFED ACTION: CALFED should revise its common program proposals to reduce, avoid, or mitigate impacts on agricultural resources. Programmatically, CALFED should develop incentives for farmers, ranchers and other landowners to achieve CALFED objectives while maintaining the private ownership and economic productivity of agricultural land and water.

5. Issue - Water Use Efficiency

POSITION: The Ag Water Caucus supports CALFED's identification of the AB 3616 Agricultural Water Management Council as the appropriate vehicle for the continued voluntary implementation of efficient water management practices and opposes any mandatory requirements for agricultural water use efficiency. Moreover, the Ag Water Caucus opposes CALFED's inclusion of water pricing and measurement practices in a context that is inconsistent with the requirements of the AB 3616 Memorandum of Understanding (MOU). Only practices that reduce irrecoverable losses actually increase the total useable water supply. Furthermore, water saved within a water district or on-farm is used elsewhere within the same district or farm.

RECOMMENDED CALFED ACTION: CALFED should modify its Water Use Efficiency Technical Appendix to accurately reflect that California agriculture is already highly efficient in its use of water and that more efficient water application does not necessarily increase useable water supplies. CALFED should also delete references in its Water Use Efficiency Technical Appendix to water pricing and measurement, inconsistent with the AB 3616 MOU, as mandatory practices. CALFED also should delete references to acreage targets. The Ag Water Caucus also believes that CALFED should accept approved water conservation plans prepared under U.S. Bureau of Reclamation criteria. These should be accepted as meeting CALFED's water use efficiency standards.

6. Issue – Water Quality and Watershed Management

POSITION: The Ag Water Caucus supports CALFED's proposal to provide financial and technical funding and assistance for development of voluntary actions and best management practices to address non-point source pollution. However, we object to CALFED's efforts to establish target values for specific compounds used in protecting agricultural crops because CALFED is not the appropriate arena for addressing this issue. The Ag Water Caucus supports the ongoing cooperative Management Agency Agreement process for protecting water quality while at the same time ensuring the continued public benefit of controlling pests.

Similarly, other local, state and federal agencies currently have jurisdiction over non-point source pollution and water quality control efforts. The Ag Water Caucus believes that the current non-point source three-tier approach adopted by the State Water Resources Control Board and the basin planning process utilized by the nine Regional Water Quality Control Boards provide the necessary framework for the protection of water quality.

RECOMMENDED CALFED ACTION: To maximize the efficient use of public resources, CALFED must embrace and encourage cooperative efforts. CALFED should assist in developing and funding water quality monitoring programs. Furthermore, CALFED should provide funding for the implementation of water quality and watershed best management practices. CALFED also must recognize and encourage existing efforts and defer to existing non-point source pollution control programs and locally driven watershed management efforts. CALFED's coordinated watershed management efforts should provide assistance for local efforts and should not mandate land use changes in these watersheds.

7. Issue - Water Transfers

POSITION: The Ag Water Caucus believes that California's water storage and conveyance capacity must be enhanced before water transfers can play a meaningful role in resolving statewide water management issues. CALFED must recognize that water transfers do not create "new" water; rather, transfers simply move water from one beneficial use to another. We support the inclusion of voluntary transfers and exchanges as a component of an integrated and balanced CALFED package.

RECOMMENDED CALFED SOLUTION: The development of water markets should be left to stakeholders. CALFED's involvement in water transfers should be limited to construction of the necessary conveyance and storage facilities that will enable transfers to play a meaningful role in California's overall water management. To the extent that CALFED identifies a specific role for water transfers as part of the CALFED solution, reasonable estimates of a range of expected transfers and reliable transfer capacity should be made. However, CALFED should not seek to change existing law regarding water transfers and should not adversely impact existing water rights or transfer programs, either directly or indirectly, through new regulations or controls.

8. Issue – Cost Allocation

POSITION: The Ag Water Caucus believes that a successful CALFED solution must include a cost allocation

methodology that will sustain the state's vibrant agricultural economy. The Ag Water Caucus supports a "benefits-based" approach over a punitive approach. However, the Ag Water Caucus strongly objects to any effort to require agricultural water users to pay any additional costs to replace water taken for environmental uses through regulatory actions, or for replacing water dedicated to environmental protection by legislative actions and the Bay-Delta Accord.

RECOMMENDED CALFED ACTION: CALFED should continue to evaluate and develop cost allocation strategies that will sustain the state's agricultural economy and recognize the public benefits derived from water quality, environmental protection, flood control, recreation, and reliable water supplies. These cost allocation strategies must consider the fact that requiring additional payment from agricultural water users to replace supplies taken through regulatory actions or dedicated in the interim to environmental protection by legislative actions and the Bay-Delta Accord is unacceptable. Since the acceptability and willingness to support a cost allocation methodology is directly linked to the benefits the CALFED Program provides, it is incumbent upon CALFED to develop the final preferred alternative, with specific identification of benefits and assurances, concurrent with the development of cost allocation strategies.

9. Issue – Implementation and Assurances

POSITION: The Ag Water Caucus strongly supports near-term, incremental implementation of the CALFED program, with early investments in system capacity where there is a potential for significant benefit to both water users and the environment (e.g., enhanced south Delta pumping flexibility and storage north, adjacent to, and south of the Delta).

RECOMMENDED CALFED ACTION: CALFED must implement environmental, water supply, water quality, and levee improvements in an integrated manner, both for the overall package and for each major step forward.

Agricultural Water Caucus CALFED White Paper

Introduction

A solution to the complex problems of the Sacramento-San Joaquin Delta is critical to all California. Much of the state's most productive farmland is irrigated with water flowing to or through the Delta. More than two-thirds of California's urban population depends at least in part on water exported from the Delta. Numerous plant and animal species depend upon the estuary for habitat. In large part, California's economic and ecological health depends upon the management of the Delta and its watersheds to meet the needs outlined above. Background information regarding California agriculture, as well as the position of the Agricultural Water Caucus on specific CALFED proposals, is outlined below.

Background

California's emergence as the national leader in agricultural production coincided with the large-scale development of water storage and delivery systems during the first half of the 20th century. The state's Mediterranean climate, fertile soils and agricultural ingenuity allow more than 300 crops to be grown commercially, provided adequate, affordable and reliable water supplies are available. California has led the nation in farm revenues in every year since 1946. Our investment in water development has contributed substantially to this dominance. California agriculture is a national and international resource that cannot be duplicated anywhere else in the world.

Economic Contributions: In 1996, the last year for which data is available, on-farm revenue in California totaled \$24.8 billion. California agriculture and related activities (packaging, transportation, marketing, etc.) combined to produce over \$70 billion in economic activity in 1996. Statewide, agriculture provides roughly 1 in 10 jobs. In the 18 counties that comprise the Central Valley, agriculture accounts for 28 percent of all employment. California is the nation's top dairy state and produces 50 percent of the nation's fruits, nuts and vegetables. In 1995, California exported over \$12 billion in agricultural products, providing one of the few bright spots in the United States' balance of trade.

These economic contributions are made by 82,000 California farms that average 366 acres in size (compared to the national average farm size of 491 acres). Approximately 75 percent of California farms are family operations. (Source: California Department of Food and Agriculture).

Environmental Contributions: Agriculture is one of the premier environmental resources in California, providing numerous environmental and open space benefits while making significant economic contributions. Agricultural

production and wildlife habitat often coexist on agricultural land. California agriculture provides a vast habitat resource, both intentionally developed and as an incidental benefit of production activities. Many species depend heavily on cultivated lands as well as rangelands for their continuing existence.

Approximately 30 million acres of privately owned land in California are devoted to agricultural production. Of this farmland, roughly 9.5 million acres are irrigated (4.5 million acres of which are irrigated with Delta water). The economic viability of agriculture allows farmers and ranchers to keep these lands in private ownership and to provide the multiple benefits of food and fiber production, open space and wildlife habitat. Because these lands are in private ownership, the environmental values they provide come at little or no cost to the taxpayer. Specific environmental benefits include:

- Innovative water management techniques allow farmers and ranchers to provide waterfowl and wetlands habitats during critical periods. In addition, agricultural lands provide valuable food resources for a variety of wildlife species. Groundwater recharge basins also provide numerous habitat benefits.
- The photosynthetic process in agricultural crops cleanses the atmosphere. For example, California rice fields produce enough oxygen each year to sustain the entire population of Los Angeles. An acre of rice biologically scrubs about 23,000 pounds of carbon dioxide from the atmosphere per year.
- Water used in crop production also plays an important role in recharging and managing California's groundwater basins.
- Flood management easements are compatible with certain types of farming operations (especially row and field crops). These lands provide jobs and remain on county tax rolls while providing flood protection and environmental benefits, such as soil conservation and decreased stream bank erosion.

Locally driven voluntary efforts to provide habitat and instream flows reflect the ongoing significant contributions of farmers and ranchers to many of the restoration proposals described by CALFED. Moreover, the reallocation of water by the Central Valley Project Improvement Act, the State Water Resources Control Board's D-1485, the application of the state and federal Endangered Species Acts, and other programs have involuntarily impacted agricultural production in the Central Valley. With respect to urban development in the Central Valley, many agricultural organizations; local, state and federal agencies; and conservation groups are united in efforts to conserve important California farmland.

In 1994, farmers and water users throughout the Central Valley began to initiate unprecedented efforts to screen diversions, refurbish fish ladders, construct siphons, remove dams and implement other habitat improvement projects. Over the past several years, hundreds of millions of dollars have been spent on these projects utilizing funding from the CVPIA Restoration Fund; the Safe, Clean, Reliable Water Supply Act of 1994 (Proposition 204); matching federal funds; and Bay-Delta Accord Category III and local sources. These continued efforts have completed screening projects and other improvements designed to improve fish habitat.

People in agriculture, like most people in California, are concerned about the environment, the economy, and the quality of life for current and future generations. These concerns require all of us to find the proper balance between often competing uses of the same resources. Some insist that this question of balance can be addressed by simply reallocating land and water resources from agriculture to other uses. However, the majority of the state's land and water resources are already publicly controlled.

California's average annual runoff (potentially available surface water supply) is 71 million acre-feet. According to the California State Department of Water Resources (DWR), the quantity of water used by agriculture is less than the quantity used for dedicated environmental purposes. In fact, more than half of the average annual runoff is used for environmental purposes. Agriculture uses approximately 34 million acre-feet of total water in average year, of which 10 million is from groundwater sources and 24 million is from surface sources. This compares to 36 million-acre feet of water used for dedicated environmental purposes (i.e., those flows required by legislation, regulation and other mandated uses, and for managed wildlife areas).

The allocation of land is similar. Data from DWR indicates that irrigated agriculture in California uses 9.5 million acres. Total agricultural land use (excluding forestry) is 30 million acres. California's total land area is 100 million acres, of which approximately 51 million acres are owned by the state and federal governments (according to the California Department of Fish and Game).

The conversion of more land or water away from agriculture simply is not in California's best interest. Such a reallocation

would negatively impact the California economy as the availability and quality of food decreases, agricultural service industries are affected and jobs are lost.

Water Management and Conservation Planning: California farmers and agricultural water districts are recognized as world leaders in water conservation and irrigation technology. Farmers and districts have made significant investments to improve water conservation and irrigation technology. Because water costs are a significant business consideration, most advances in water conservation and irrigation technology have been economically driven. At the on-farm level, innovative practices adopted by growers include: 1) planting improved crop varieties; 2) laser-guided land leveling technology; 3) designing irrigation techniques and delivery systems to ensure optimum efficiency for specific crops, soils and applications; and 4) adopting and improving water recycling programs.

Overall, plants must consume a fixed amount of water to produce a crop. Restrictions of water applications below plant requirements reduce crop yields.

Agriculture's Role in California's Future

While California agriculture is not constrained by access to markets, the industry is and will be constrained by the **accessibility, affordability and reliability** of land and water resources. California farmers and ranchers now produce food and fiber for most Californians, as well as 25 percent of the food supply for the entire U.S. population and much of the world. Today, this important resource is threatened by these constraints. Agricultural jobs throughout the state also are threatened, as is the economic sustainability of California's rural communities.

As California's population continues to grow, the urbanization of farmland will affect agricultural production. **In less than 30 years**, there will be 20 million more Californians to feed, 90 million more U.S. citizens to feed, and two billion more people competing for food and fiber on the world market. From a national policy perspective, the nation should clearly maintain its agricultural independence. To continue supplying food for an ever-increasing population, California's agricultural sector must have an adequate and reliable supply of water, and every effort must be made to minimize the loss of productive agricultural lands.

Water demand in California will not decrease over the 30-year CALFED planning and implementation period. In fact, as 20 million more people inhabit the state by 2030, water demand will increase commensurately. It is often cited that one acre-foot of water (326,000 gallons) is the average annual water consumption for a family of five living in a suburban house. However, the demand embodied in the food and fiber consumed each year by this family, or the 20 million additional family members anticipated by 2030 is not considered when forecasting increased water demand. It is estimated that to feed a family of five for a year requires about four acre-feet of water to grow the necessary crops and produce the necessary meat and poultry (0.8 ac-ft/person/yr.). It should be noted that only about one percent of the water needed to grow crops or produce meat actually ends up in the food we eat. Thus, the equivalent of an additional 16 million acre-feet of water will be needed to feed 20 million more people in California by 2030.

To meet this demand, new sources of water (and land) must be identified and developed. These new sources include recycling, reuse, reclamation, groundwater storage and surface water storage. All strategies will be needed. According to DWR Bulletin 160-98, the greatest potential lies in urban reclamation and new surface storage.

Because agriculture provides the vast majority of privately owned open space in California, such population growth could cause severe impacts on our environment. New integrated policies designed to focus growth around current urban areas, to conserve important farmland, and to provide adequate, affordable and reliable water supplies will be critical to the state's future.

The Ag Water Caucus Position on the CALFED Program

The CALFED Bay-Delta Program must recognize existing agricultural surface and ground water rights and area of origin rights, as well as existing contractual obligations of the state and federal governments. New water demands (for urban growth and environmental uses) must look to newly developed water supplies. The Ag Water Caucus strongly objects to any effort to require agricultural water users to pay any additional costs to replace water taken for environmental uses through regulatory actions, or for replacing water dedicated to environmental protection by legislative actions and the Bay-Delta Accord.

A primary benefit of the CALFED Program for agriculture is development of an adequate, affordable and reliable water supply. Water supply reliability must be defined as the timely delivery of water adequate to sustain crops. The Ag Water Caucus does not accept the position of certain stakeholders that "less water delivered more often" is consistent with the CALFED solution principles.

The Ag Water Caucus strongly supports near-term incremental implementation of the CALFED program, with early investments in system capacity where there is a potential for significant benefit to both water users and the environment.

1. ISSUE – WATER SUPPLY AND STORAGE:

CALFED's alternatives include surface and groundwater storage options ranging from no new storage up to a total of 6.45 million acre feet of additional storage. Specifically, CALFED has proposed the following storage options:

Region/Storage Type	Proposed Storage Capacity
Sacramento Valley	
Surface storage	0 to 3,000,000 acre-feet
Groundwater storage	0 to 250,000 acre-feet
San Joaquin Valley	
Surface storage	0 to 500,000 acre-feet
Groundwater storage	0 to 500,000 acre-feet
Off-aqueduct Storage	
Surface storage	0 to 2,000,000 acre-feet
In-Delta Storage	
Surface storage	0 to 200,000 acre-feet

Position: The Ag Water Caucus strongly asserts that additional water storage capacity must be part of CALFED's common programs rather than variable options.

Recommended CALFED Action: Additional storage should be moved from variable options to the suite of CALFED common programs. CALFED's storage proposals should directly address the effect of such storage options on water yield, power consumption versus power production, flood control benefits, and opportunity for multiple benefits in the use of increased yield. Most existing reservoirs were justified in part for flood control and financed in part by increased power production. CALFED has focused on off-stream reservoirs that would be filled only after peak flood flows (in order to accommodate environmental flows), and which even then could fill only at a limited rate. These reservoirs would also typically be large power consumers rather than power producers, increasing the unit cost of the yield. While off-stream reservoirs may have some benefits, new reservoir planning should not focus on the particular type of reservoir to be built. Any new reservoirs must provide multiple benefits and must be cost effective.

The CALFED solution must provide for substantial new water yield to meet the water quality and supply needs of agricultural, urban and environmental water uses upstream of the Delta, in the Delta and in Delta export regions. Water supplies generated by new storage should provide multiple benefits, meeting those needs identified in the CALFED Ecosystem Restoration Program Plan, and for flood control, power generation and water supply in the region where the storage site is located, as well as in other upstream areas, the Delta, and export areas. The only effective way to protect agricultural and area of origin water rights is to require new water demands to be met with new supplies. New water yield, rather than new storage capacity, must be the criterion against which storage options are evaluated. Increased water yield should be developed in the regions in which it is needed (i.e., north and south of the Delta, as well as adjacent to the Delta).

New Surface Storage in the Sacramento Valley: We support the construction of new surface storage capacity in the Sacramento Valley. New storage should provide benefits to water users and the environment comparable to or better than the proposed storage project at Sites Reservoir. Other sites, including an expanded Shasta Reservoir, must be equally evaluated.

New Surface Storage Adjacent to the Delta: The ability to store additional water adjacent to the Delta during high flow periods for later use also is critical to meeting water supply, water quality and environmental objectives. The Ag Water Caucus supports the construction of new surface storage adjacent to the Delta. New storage should provide benefits for the environment and water users comparable to or better than enlarging the Contra Costa Water District's Los Vaqueros Reservoir project.

New Surface Storage South of the Delta: We support the construction of new surface storage south of the Delta. New storage should provide multiple benefits for flood control, fisheries, power generation, and water quality in the south Delta. Both on-stream and off-stream sites, including on San Joaquin River and Tulare Lake Basin tributaries, as well as on the west side of the San Joaquin Valley, should be evaluated.

Groundwater Storage and Conjunctive Use: We believe that CALFED's groundwater storage and conjunctive use options alone will not resolve California's need for increased water storage. The Ag Water Caucus strongly believes that any groundwater storage or conjunctive use strategy must be locally initiated and supported by the local groundwater users and communities involved. Although there is a tendency to think of groundwater in terms of a homogeneous underground reservoir that fluctuates gradually with wet and dry cycles, the reality is more complex. While many groundwater basins are interconnected, aquifer structure is far from uniform and horizontal movement of groundwater is slow. Even within a small sub-area, groundwater resources can range from abundance to scarcity within a few miles. Groundwater management programs, therefore, must be developed on the local level and supported by local affected groundwater users and communities. A "one-size-fits-all" approach will not work in all basins or sub-basins. These locally supported programs must assure the agricultural groundwater users in basins or sub-basins not currently managed by groundwater storage and conjunctive use programs that groundwater levels will be protected to prevent overdraft and the subsequent increases to water costs.

Groundwater users will not "get better together" if CALFED does not acknowledge the importance of maintaining groundwater levels for agricultural uses as well as the surface water rights and contracts of agencies and individuals. In all cases, conjunctive use programs must recognize the paramount groundwater rights of farmers, ranchers, local water agencies and other landowners. Any effort to manage groundwater conjunctively with surface water supplies must recognize impacts to third parties and mitigate for these. Finally, CALFED must recognize the geologic and hydrologic limitations to groundwater storage.

Farmers and agricultural water entities have been managing groundwater and surface water conjunctively for decades, which must be recognized by CALFED. We support CALFED's proposal to assist local entities with local conjunctive management programs. The Ag Water Caucus encourages CALFED to support voluntary agricultural practices that enhance groundwater recharge where capacity exists.

2.Issue - Agricultural Land/Water Conversion and Retirement: CALFED's common programs and alternatives include proposals to fallow and/or convert agricultural land and water to other uses. Some stakeholders, as well as some CALFED agencies, continue to support large-scale land retirement in the San Joaquin Valley as a method for reducing export water demands.

Position: The Ag Water Caucus opposes the widespread conversion of agricultural land and its associated water resources to other uses. While some locally driven, voluntary programs that address specific issues may have merit, widespread land retirement and/or conversion is unacceptable. Land and water conversion in most cases violates CALFED's solution principles. Land conversion does not allow agriculture to move forward with other stakeholders. Specifically, land retirement does not **reduce conflicts** because demands on California's water delivery and storage system will continue to exceed capacity. Conversion does not meet the test of **equitability** when the devastation of Central Valley agricultural production and rural economic activity are compared to uncertain and unquantified environmental benefits. Land and water conversion is not **affordable** when viewed in the context of impacts on economic activity, employment, local infrastructure and our balance of payments. Finally, conversion clearly violates the principle of **no significant redirected impacts**.

Agriculture is a significant resource that provides multiple benefits to all Californians. To the extent that agricultural land and water are taken out of production for any reason, CALFED must mitigate or avoid any impacts, as required by the California Environmental Quality Act (CEQA).

The Ag Water Caucus' positions on specific land and water conversion proposals in the CALFED draft programmatic environmental impact statement/report (PEIS/R) are outlined below:

Ecosystem Restoration Program: CALFED's Ecosystem Restoration Program Plan includes the following conversion of agricultural land and water to habitat:

Program/Region	Acreage	Water (acre-feet)
Ecosystem Restoration	127,300 to 152,000 acres	Up to 500,000 AF
Sacramento Valley	20,000 to 26,000 acres	
In-Delta	98,000 to 115,000 acres	
San Joaquin Valley	9,300 to 11,000 acres	

Position: The Ag Water Caucus opposes the conversion of the above agricultural land and water to ecosystem restoration. Alternative approaches that do not rely on agricultural land conversion should be developed. The Ag Water Caucus is concerned that CALFED's proposal to acquire Delta agricultural lands and riparian water rights for ecosystem restoration could result in the converted lands diverting more water for habitat use than is currently being diverted for agricultural use, resulting in a net reduction of the overall agricultural supply.

Recommended CALFED Action: CALFED must evaluate ecosystem restoration alternatives that maintain land in private ownership and that recognize locally designed programs. To date, CALFED has largely ignored the potential for voluntary partnership actions on the part of farmers and ranchers to manage private lands in a manner beneficial to wildlife species while maintaining agricultural economic viability. Recent amendments to the California Endangered Species Act authorize voluntary local programs under which farmers and ranchers may incorporate habitat and species friendly actions into their operations. In return, these producers are protected from the threat of liability for accidental or incidental "take" of state-listed species. Similar authorization and protection incorporated into federal law could open the door to a substantial increase in habitat on agricultural lands statewide, making it unnecessary to convert agricultural acreage for ecosystem restoration.

CALFED also must ensure that neighboring landowners will not be negatively affected by habitat restoration activities. Project sponsors must initiate National Environmental Policy Act (NEPA) and CEQA processes as soon as possible, with involvement from all affected landowners and related stakeholders. In cases where CEQA compliance is not required, a representative public process should be developed to determine how specific actions are prioritized and selected – and to work with local interests to effectively implement these programs. Finally, the Ag Water Caucus insists that CALFED evaluate and disclose the cumulative impacts of this and other actions (including the Central Valley Project Improvement Act, the state and federal Endangered Species Acts, and others).

The implementation of projects to improve and expand existing habitat must not subject existing landowners and stakeholders to associated environmental restrictions.

- A comprehensive regional flood control assessment must accompany each ecosystem restoration project involving riparian land acquisition.
- Restoration projects must not limit local agencies' abilities to conduct activities that are necessary to properly operate and maintain existing flood control facilities and protect public safety.
- Contingency funding should be available for each project to compensate for reasonable foreseen and unforeseen circumstances resulting from project implementation.

- Landowners who currently hold riparian water rights must not have their historic rights severed or reduced by habitat restoration efforts.

CALFED should restructure the Ecosystem Restoration Program Plan to avoid, reduce or mitigate potential impacts to agricultural water and land resources. The program should develop an approach that emphasizes collaborative local projects with local landowners. Its conceptual approach of focusing on ecological processes supported by flow augmentation and habitat development must be scientifically verified before broad implementation occurs. Other stressors, such as food web alterations resulting from introduced species, predation, commercial and sport harvest, and unknown toxicity, must be evaluated and addressed.

Water Quality Program: CALFED's Water Quality Common Program includes proposals to retire the following amount of land:

Program/Region	Acreage	Water (acre-feet)
Water Quality	35,000 to 45,000 acres	
Sacramento Valley	35,000 to 45,000 acres	
In-Delta		
San Joaquin Valley		

Position: The Ag Water Caucus believes that local efforts to address water quality should take precedence over land retirement to achieve water quality objectives. Even the San Joaquin Valley Drainage Report (the 1990 "Rainbow Report") supports local programs addressing water quality and indicates that land retirement is the alternative of last resort. Land retirement should not be viewed as a substitute for developing a drainage system to maintain valley-wide salt balances.

Recommended CALFED Action: CALFED should focus on water quality program improvements that are locally supported and administered as an alternative to land retirement. CALFED's efforts should support programs developed by local water users and contractors to address water quality issues.

Long-Term Levee Protection Program: CALFED proposes to acquire the following acreage as part of its Levee Protection Common Program:

Program/Region	Acreage	Water (acre-feet)
Long-Term Levee Protection	34,000 to 35,000 acres	
Sacramento Valley	34,000 to 35,000 acres	
In-Delta		
San Joaquin Valley		

Position: Setback levees and flood control easements are not substitutes for ongoing channel maintenance. Neighboring landowners should not be impacted.

Recommended CALFED Action: CALFED should evaluate flood control and flood protection measures that maintain private ownership and agricultural operations.

Storage and Conveyance Options: Storage and conveyance facilities are projected to remove the following amount

of farmland from production and private ownership:

Program/Region	Acreage	Water (acre-feet)
Storage and Conveyance	0 to 82,100 acres	
Sacramento Valley	0 to 32,000 acres	
In-Delta	0 to 33,500 acres	
San Joaquin Valley	0 to 16,600 acres	

Position: The Ag Water Caucus recognizes that some agricultural lands will be converted because of facilities construction.

Recommended CALFED Action: None.

Land Retirement for Demand Reduction: While this is not an official CALFED proposal, some stakeholders and CALFED agencies continue to press for large-scale land retirement to reduce export water demands.

Program/Region	Acreage	Water (acre-feet)
Demand Reduction	400,000 to 600,000 acres	1.4 MAF
Sacramento Valley		
In-Delta		
San Joaquin Valley	400,00 to 600,000 acres	

Position: Land retirement for demand reduction was eliminated from further discussion at the end of Phase 1, and should remain "off the table." The increasing demand for food and fiber in California and the world dictates that we must maximize the land area available for crop production in this state. Large-scale farmland retirement would devastate California's economy and force the state and nation to rely more heavily on imported food supplies. California farmers produce the safest, highest quality food and fiber in the world, yet this productivity would be jeopardized by large-scale land retirement.

Total Agricultural Land Fallowing/Conversion:

Program/Region	Acreage	Water (acre-feet)
TOTALS	196,300 to 314,100 acres	>1.9 MAF
Common Programs	400,000 to 600,000 acres	
Demand Reduction	596,300 to 914,100 acres	
Grand Total		

Recommended CALFED Action: CALFED must eliminate the concept of land retirement from further discussion or analysis. Furthermore, CALFED must analyze the potential effects of its common programs on agricultural resources via

the NEPA and CEQA processes. California's agricultural resources, including land and water, are of global significance and thus a significant part of the existing environment as defined by NEPA and CEQA. Accordingly, impacts of redirecting agricultural land and water to other uses must be critically analyzed in the PEIS/R. Both NEPA and CEQA require CALFED to seriously consider alternatives that will not impact agricultural resources, such as using available non-agricultural and/or public lands to satisfy the needs of the Ecosystem Restoration Program Plan. Measures to fully mitigate any impacts on agricultural resources must be developed to internalize the true costs of a project. Unless full mitigation is included in the PEIS/R, it will not fully disclose the costs of the CALFED Program to the public and decision-makers. An informed decision, therefore, will be impossible without such disclosure.

3. Issue - CALFED Water Conveyance Alternatives: CALFED's Alternative 1 would make minor modifications to Delta channels to improve conveyance. Alternative 2 would make substantial modifications to Delta channels. Alternative 3 combines modified Delta channels with an isolated facility that would be capable of moving water through the Delta as well as around the Delta under certain conditions.

Position: The Ag Water Caucus strongly asserts that improved conveyance is essential to meet the CALFED water supply reliability, water quality, flood control and fishery objectives. The Ag Water Caucus maintains that the minor improvements identified in Alternative 1 are inadequate to meet these objectives. Further refinement and optimization of Alternatives 2 and 3 are necessary to determine if each can accomplish an acceptable level of improvement. The Ag Water Caucus also believes that such improvements are only effective if linked with additional storage.

Alternative 2 appears to provide conveyance improvements at a cost less than Alternative 3. However, as currently designed, Alternative 2 is significantly less adequate than Alternative 3 with respect to fishery protection, export water quality and earthquake protection. Alternative 3, as presently designed, is less adequate in protecting in-Delta water quality, presents additional challenges in flood protection, creates problems of seepage on adjacent lands, involves land severance problems, and has higher costs. It also does not include the inherent assurances provided by a Delta "common pool."

A final decision regarding conveyance systems cannot be made until the issues outlined above are addressed and until operating criteria, contractual and institutional assurances, and a mitigation package for adverse impacts including impacts on fishery and water quality (both in-Delta and for export uses) are developed.

Recommended CALFED Action: CALFED must perform additional analyses to address the relative weaknesses associated with Alternatives 2 and 3, and try to optimize each of these alternatives to determine if each can accomplish acceptable levels of improvement in all solution areas. The analysis of Alternative 2 must improve its design related to fisheries, export water quality and seismic risk. The analysis of Alternative 3 must protect in-Delta water quality, flood control benefits, seepage and other impacts.

4. Issue - CALFED Common Programs: CALFED has developed six programs to be implemented regardless of the water conveyance and storage alternatives selected. These programs include the following:

- Ecosystem Restoration,
- Water Quality,
- Water Use Efficiency,
- Levee System Integrity,
- Water Transfers, and
- Coordinated Resource Management.

As discussed throughout this white paper, many of these common programs propose to convert agricultural land and/or water to other uses.

Position: The Ag Water Caucus believes the common programs should be revised to maintain land in private ownership and agricultural production and to provide incentives for landowners to participate in program objectives. Furthermore, we believe that increased surface storage must be added to the list of common programs. Storage and conveyance enhancements must be implemented in concert with the common programs to ensure their success. For example, increased storage capacity is needed to successfully operate the Ecosystem Restoration Program.

Recommended CALFED Action: CALFED should add storage as a common program rather than a variable component. Also, CALFED should revise its common program proposals to reduce, avoid, or mitigate impacts on agricultural resources. This must be incorporated into the PEIS/R. Programmatically, CALFED should develop opportunities for farmers, ranchers, and other landowners to achieve CALFED objectives while maintaining the economic productivity and private ownership of agricultural land and water. CALFED's common programs must be compatible with flood management objectives.

5. Issue - Water Use Efficiency: CALFED has established a target of 5.5 to 6 million acres of irrigated farmland throughout the CALFED solution area that must be covered by a water conservation management plan endorsed by the Agricultural Water Management Council. Furthermore, CALFED has stated that lack of progress on voluntary efforts to achieve the target acreage could result in regulation or legislation mandating agricultural water conservation measures. Finally, CALFED has indicated that water users will not receive benefits, including new water, from CALFED programs or facilities unless they are participating in the water use efficiency program, including some form of mandatory water measurement and volumetric pricing (These EWMPs are only implemented under the AB 3616 Memorandum of Understanding (MOU) after a detailed net benefit analysis indicates the practices are appropriate for a signatory).

In addition to the efforts of the Agricultural Water Management Council (which is moving forward independent of CALFED's water use efficiency efforts), many agricultural water suppliers and users are engaged in ongoing efforts to conserve water. While CALFED does address urban water use efficiency, the draft PEIS/R fails to hold in-stream and off-stream environmental uses to similar standards of accountability.

Position: The Ag Water Caucus supports continued voluntary implementation of efficient water management practices endorsed by the AB 3616 Agricultural Water Management Council. We oppose any mandatory requirements for agricultural water use efficiency. Increased application efficiency does not typically increase water supplies for other beneficial uses. The Caucus supports water conservation plans certified by the Council or approved by the Bureau of Reclamation. Further, until the AB 3616 criteria and the U.S. Bureau of Reclamation-approved water conservation criteria are merged, CALFED should explicitly accept USBR-approved water conservation plans as equivalent to a plan endorsed by the AB 3616 Council. The Caucus also is opposed to CALFED's inclusion of mandatory water measurement and pricing criteria in its water use efficiency program. These practices are not consistent with the current AB 3616 MOU. If CALFED proposes to accept the AB 3616 process, then it is inappropriate for CALFED to propose unilateral changes to any aspect of the MOU. This "one size fits all" approach fails to account for the tremendous diversity in agriculture throughout the state.

The Ag Water Caucus believes that the CALFED target of 5.5 to 6 million acres of irrigated farmland to be covered by an endorsed water management plan by January 1999 is both an unrealistically short timeframe, and an unsupported target. The AB 3616 MOU allows two years from the date of admittance into the Agricultural Water Management Council for a water supplier to prepare a water management plan and submit it to the Council for endorsement. Therefore, the CALFED timeframe contradicts the AB 3616 MOU. Again, if CALFED intends to embrace the AB 3616 MOU as satisfying its water management requirements, then CALFED should not unilaterally alter conditions of the MOU.

Furthermore, while CALFED has identified 8-9 million acres of irrigated acreage within its solution area, a substantial amount of this acreage is not within any organized water district. Consequently, CALFED's acreage targets are unrealistically high. Over 4 million acres are already signatory to the AB 3616 MOU or subject to U.S. Bureau of Reclamation water conservation criteria, or both. Both the AB 3616 MOU process and the U.S. Bureau of Reclamation water conservation criteria are intended for implementation by water suppliers. Rather than focus on a specific acreage target, CALFED should focus on providing sufficient support for water management programs to elicit additional implementation.

In the future, technological improvements in irrigation systems will likely increase the overall efficiency of agricultural water use. However, such technology improvements will not reduce demands for Delta water supplies sufficiently to impact the need for expanded Delta conveyance facilities or the operation of project storage facilities.

According to DWR Bulletin 160, increased water use efficiency measures will not decrease depletions in the Sacramento River or Tulare Lake regions, and will only decrease depletions in the San Joaquin River region by 2,000 acre-feet. The Bulletin further states that "almost all excess applied irrigation water is reused, ultimately percolating to groundwater or draining back into rivers...." As a result, increased agricultural water use efficiency will create no significant amount of "new" water, which must be recognized by CALFED.

Specific water application efficiency targets must not be linked to access to CALFED benefits (i.e., new water or use of CALFED facilities). The Ag Water Caucus believes that CALFED's stated goal of achieving 85 percent application efficiency throughout California agriculture is unsupported scientifically and unachievable practically. We also believe that "new" water created by CALFED is water **over and above** quantities taken from water users for environmental uses through regulation, and above quantities dedicated to ecosystem protection by legislative actions and the Bay-Delta Accord. Finally, the Caucus believes that locally driven approaches to water conservation are necessary to avoid negative impacts to land, groundwater storage and water quality.

Recommended CALFED Action: CALFED should modify its Water Use Efficiency Technical Appendix to accurately reflect that California agriculture is already highly efficient in its use of water, and that more efficient water application does not necessarily increase water supply. Only practices that reduce irrecoverable losses actually increase the total useable water supply. Furthermore, water saved within a district or on a farm is used elsewhere within the same district or farm. To maximize profits, agricultural producers must hold down all costs, including water costs, which provides additional incentive to use water as efficiently as possible. The CALFED preferred alternative must focus on water use management through region-specific plans that take into consideration such factors as surface and groundwater quality and quantity, soil quality and type, cultural practices, economic and environmental benefits. Furthermore, CALFED must recognize and disclose that increasing application efficiency often reduces the incidental environmental benefits that are associated with agricultural practices, and can actually increase overall agricultural water use rather than decrease it.

CALFED should support the AB 3616 MOU and its timeframe for endorsement. CALFED also should assume a leadership role in developing and supporting a program of education, outreach and technical assistance for water suppliers and users to develop water conservation and management plans under the AB 3616 MOU.

CALFED should review the California Department of Water Resources' Bulletin 160-98, which documents that the environment is the largest consumer of water in California. Accordingly, CALFED should develop efficiency standards for all current and new environmental uses of water within the CALFED solution area, both in-stream and off-stream, which hold environmental water uses to standards of accountability similar to those demanded for urban and agricultural users. CALFED must insist on bringing these standards to parity. Additionally, CALFED must quantify specific environmental needs, such as the following:

- How much water is or will be needed, where, when, and for what purposes;
- How environmental water needs will be met; and
- How CALFED will hold environmental water uses to standards of accountability as is currently being done to assess agricultural and urban standards of accountability.

The Ag Water Caucus suggests setting an upper limit on environmental flows with criteria and procedures that include stakeholder input before that limit can be raised.

The Ag Water Caucus strongly supports the current CALFED policy that agricultural land retirement for demand reduction purposes is not equitable, is too costly and has unacceptable redirected impacts, and therefore is not a part of the Water Use Efficiency program.

6. Issue - Water Quality and Watershed Management: In addition to addressing salinity and selenium issues, CALFED's water quality common program addresses pesticides and non-point source pollution issues. Certain pesticides have been identified in surface waters of the Bay/Delta estuary and its watersheds at levels that may impair aquatic life beneficial uses. Current scientific knowledge is inadequate to determine the significance or extent of impairment. CALFED's watershed management common program addresses land uses and management in upper watersheds. However, CALFED fails to address the issue of long-term salt balance in areas with no natural outlet.

Position: The Ag Water Caucus supports CALFED's proposals to provide financial and technical funding and assistance for development of voluntary actions and best management practices to address non-point source pollution. However, we object to CALFED's efforts to establish target values for specific compounds used in protecting agricultural crops, as included in the Water Quality Technical Appendix. CALFED is not the appropriate arena for addressing this issue. The State Water Resources Control Board and the California Department of Pesticide Regulation have a Management Agency Agreement (MAA) in place to address pesticide issues. The Ag Water Caucus supports this ongoing cooperative process

for protecting water quality as well as ensuring the continued public benefit of controlling pests.

Similarly, other local, state and federal agencies currently have jurisdiction over non-point source pollution and water quality protection efforts. The Ag Water Caucus believes that the current non-point source three-tier approach adopted by the State Water Resources Control Board and the basin planning process utilized by the nine Regional Water Quality Control Boards provide an adequate framework for the protection of water quality. Furthermore, the State Water Resources Control Board has entered into MAAs with the Bureau of Land Management and the United States Forest Service to address non-point source pollution issues in the upper watersheds that are the source for much of the water flowing to and through the Delta.

Recommended CALFED Action: To maximize the efficient use of public resources, CALFED should embrace and encourage current and future cooperative efforts to improve water quality. CALFED should assist in the development and funding of water quality monitoring programs and should provide funding for the implementation of best management practices. Furthermore, CALFED's coordinated watershed management efforts should provide assistance for local efforts and should not mandate land use changes in these watersheds.

CALFED must recognize and encourage existing efforts and defer to existing non-point source pollution control programs.

7. Issue - Water Transfers: Voluntary water transfers are one means of ensuring that California's most precious resource continues to be put to reasonable beneficial use to the maximum degree practicable. California has a long history of beneficial water sales and exchanges among agricultural water users, primarily within basins and/or among water suppliers. These transfers have typically not harmed third parties and rural social interests because of the sensitivity of the transferring parties to those interests. There have also been some arrangements between agricultural water users and other non-agricultural users that have been beneficial to both parties and have not depleted the long-term agricultural water supply.

Position: California's water storage and conveyance capacity must be enhanced before water transfers can play a meaningful role in resolving statewide water management issues. One of the most significant current constraints to transfers through the Delta is reliable conveyance capacity. We believe that CALFED must recognize that water transfers do not create "new" water; rather, transfers simply move water from agriculture to other uses. Without improvements to California's water storage and conveyance facilities, therefore, water transfers potentially violate CALFED's solution principles by redirecting impacts toward agriculture.

We support the inclusion of voluntary transfers and exchanges as a component of an integrated and balanced CALFED package. However, we are concerned about the current lack of analysis regarding the actual capacity and demand for water transfers. This has led to unrealistic conclusions regarding the ability of water transfers and exchanges to meet the CALFED solution principles.

Consideration of the many issues involved with water transfers is complicated. Agricultural interests developed a transfer policy in 1992 that stresses, among other things, protection of water rights, voluntary transfers, local control and minimal third party impacts. Mandatory water transfers, including regulatory reallocations, are unacceptable to agriculture. We oppose permanent reallocations of water through water transfers that reduce the long-term supply of agricultural water. We also oppose short-term transfers that result in the development of long-term demand for agricultural water supplies.

CALFED's water transfer policies also should assure that the burden of proof regarding groundwater impacts of water transfers lies with the parties to the transaction, and not on non-participating groundwater users.

Recommended CALFED Action: The development of water markets should be left to stakeholders. CALFED's involvement in water transfers should be limited to construction of the necessary conveyance and storage facilities that enable transfers to play a meaningful role in California's overall water management. To the extent that CALFED identifies a specific role for water transfers as part of the CALFED solution, reasonable estimates of a range of expected transfers and reliable transfer capacity should be made. However, CALFED should not seek to change existing law regarding water transfers and should not adversely impact existing water rights or transfer programs, either directly or indirectly, through new regulations or controls.

For agricultural groundwater users, protections must be clearly defined. Current law states that a transfer must not unreasonably affect the overall economy of the area from which the water is being transferred. Agricultural groundwater

users must not be considered an expendable part of local infrastructures and economies. The definition of legal water users must include individual farmers and ranchers dependent solely or partially on groundwater.

8. Issue - Cost Allocation: CALFED and the BDAC Finance Workgroup have developed general principles of cost allocation. These principles include concepts of equity, fairness, and benefits-based allocation.

CALFED has adopted a "beneficiary pays" concept over a punitive cost allocation methodology aimed at recovering from parties who allegedly created environmental damage in the past. In this regard, certain common programs are proposed to be funded with public monies while other common programs that provide "benefits" to water users are proposed to be funded with user fees. In general, CALFED has determined that facilities should be funded by the beneficiaries of those facilities.

Position: The Ag Water Caucus believes that a successful CALFED solution will include cost allocation principles that will sustain the state's vibrant agricultural economy. The Ag Water Caucus supports a "benefits-based" approach over a punitive approach. However, the Ag Water Caucus strongly objects to any effort to require agricultural water users to pay any additional costs to replace water taken for environmental uses through regulatory actions, or dedicated to environmental protections by legislative actions and the Bay-Delta Accord. The costs of the CALFED program must be apportioned in a manner mutually agreeable to the state and federal governments, and stakeholder interests pursuant to long-term cost-sharing agreements to be developed as part of the CALFED package.

Recommended CALFED Action: CALFED should continue to evaluate and develop cost allocation strategies that sustain the agricultural economy and recognize the public benefits derived from water quality, environmental protection, flood control, recreation, and adequate water supplies. These cost allocation strategies must acknowledge that any effort to require additional payments from agricultural water users to replace supplies taken for environmental uses through regulatory actions or dedicated in the interim to environmental protections by federal actions and the Bay-Delta Accord is unacceptable. Since the acceptability and willingness to support a cost allocation methodology is directly linked to the benefits the final alternative provides, it is incumbent upon CALFED to develop the final preferred alternative, with specific identification of benefits and assurances, concurrent with the development of cost allocation strategies.

CALFED should identify how it will develop new water supplies for long-term environmental uses. These environmental water supplies should be developed and paid for at public expense. These costs must be estimated and disclosed in the PEIS/R so that the public and stakeholders can make informed decisions on the CALFED Program.

9. Issue - Implementation and Assurances: The implementation of CALFED programs and assurances regarding the implementation of CALFED programs, including construction and operation of facilities, is crucial to CALFED's success.

Position: While CALFED solutions focus on the long-term, we strongly support incremental, near-term implementation actions, with early investments in system conveyance capacity and storage where there is a potential for significant benefit for both water users and the environment (e.g., enhanced south Delta pumping flexibility and storage north, adjacent to, and south of the Delta).

Recommended CALFED Action: The proposed programs, facilities, and related actions described in CALFED's draft PEIS/R cannot be completed immediately. Indeed, certain features may require more than 20 years to complete. Therefore, the Ag Water Caucus proposes the following phasing schedule for implementation of various CALFED program elements. To meet the fundamental precepts under which CALFED was formed and Proposition 204 was passed by the voters, the CALFED Program must be designed to ensure that implementation occurs in a balanced manner. Proposition 204, which provides substantial funding for ecosystem restoration elements of the CALFED program, requires that the total CALFED program be carried out in a manner "that ensures that balanced solutions in all identified problem areas ... are achieved...." To meet this mandate, environmental, water supply, water quality, and levee improvements must be implemented in an integrated manner, both for the overall package and for each major step forward. Major elements of any assurance package must include:

1. Endangered Species Act (ESA) Protections: water users need assurances under the ESA that there will be "no surprises" and that once a completed assurance package is in place, water users will not face any further takings of water supplies under the federal and state endangered species acts. Landowners and water right holders also need

assurances that their land and water will not be targeted by fish and wildlife agencies as mitigation under the endangered species acts.

2. **Implementing Entity:** the Ag Water Caucus will evaluate the need for a new entity to carry out the ecosystem restoration program, along with governance proposals, adaptive management and peer review strategies, financing mechanisms, and assurances.
3. **Area of Origin Protections:** protective measures must be taken to ensure that the water supply needs of the areas of origin will be met adequately and affordably. These protections may take the form of reaffirmation of statutory provisions, facilities, and other programs.
4. **Permitting:** the CALFED solution elements must move forward as one integrated package to ensure balanced implementation of all elements. These program linkages are key to ensuring that the environmental, water quality and water supply needs are met in a balanced manner. Procedures for obtaining needed permits in a timely, packaged manner for all elements of the CALFED program must be provided.
5. **Consistency with State and Federal Programs:** the CALFED solution must include procedures to ensure that water rights permits, water quality control plans, and statutes such as the Central Valley Improvement Act, are implemented in a manner consistent with the CALFED plan and related agreements.
6. **Assurances:** these must be crafted to provide long-term system operation guidelines that protect the environment as well as water users throughout the Central Valley watershed, including the Delta. Assurances should be developed before a preferred alternative is adopted.

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 California Farm Bureau Federation
 California Farm Water Coalition
 California Fertilizer Association
 California Forestry Association
 California Grain and Feed Association
 California Seed Association
 Central Valley Production Credit Association
 Central Valley Project Water Association
 Colusa-Glenn Production Credit Association
 Del Puerto Water District
 Delta Water Users Authority
 Dudley Ridge Water District
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Farmers and Ranchers

COMMITMENT to CONSERVATION

A report on
voluntary actions
California farmers
and ranchers
are taking to
enhance wildlife

 California Farm
Bureau Federation

C-096810

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INTRODUCTION

While many wildlife restoration projects take place on state and federal lands, the majority of our country's wildlife populations are found on private property. This fact puts our nation's farmers and ranchers in a unique position. Many have chosen to take action in order to see native habitat and wildlife populations flourish on their operations. The California Farm Bureau Federation has noticed this trend in our own state, and we have compiled examples of the efforts taken by many of California's farmers and ranchers as they work toward promoting healthy wildlife populations on their property. The following is a series of farmer and rancher profiles that highlight the activities of individual agriculturists like Larry Hyder, a forester in El Dorado county, Don Brazil, a cattle and hay rancher in the Scott Valley, and Nathan Carver, a rancher in Kern county. These individuals, like countless others throughout the state, have made a commitment to manage their property for agricultural production and wildlife preservation.

Although the following profiles represent diverse projects for various wildlife species and habitats throughout the state, they are merely the tip of the iceberg. We found that most farmers consider their efforts to help wildlife beneficial to their agricultural operation, discovering that the health of their land is often reflected in the health of their wildlife populations. Says Scott Kemp, an Owens Valley rancher, "if you're going to stay in the business you've got to manage for everything."

More often than not, farmers and ranchers manage their wildlife as an extension of their agricultural activities, understanding their responsibility to care for the land for both social and personal reasons, including the desire to pass the land on to their children in a better condition. As Stan Hunewill of Mono county puts it, "few people know the land as well as the people who've lived on it for several generations - who've seen what works and what doesn't." Dave Fisher of San Bernardino county says that they care for their wildlife because "it's all a part of our operation - it's a part of our life... a part of us. It's the way we operate." As Tom Ellis of Colusa county puts it, "I think we really could make a difference."

California farmers and ranchers participate in activities ranging from wood duck nesting box projects to riparian zone restoration. Northern and Central Valley Californians are often involved in artificial wetlands creation and 'egg rescues,' while agriculturists in the Cascades and the Sierras strive to improve fish habitat by restoring waterways and riverbanks. Ranchers in the southern part of the state, used to dealing with water issues, endeavor to develop year-

round water sources for both their cattle herds and wildlife populations. Foresters throughout the state are particularly interested in maintaining the health of their forest and woodland habitat through responsible resource management.

Some of the operations profiled in this report receive outside financial assistance, allowing them to take additional conservation steps. The majority, however, are forced to operate within their own financial means and economic viability. Frequently, this influences whether land can be fallowed or what resources can be allocated.

Many of our state's farmers and ranchers work cooperatively with government agencies while many opt to rely strictly on their own resources. There is, however, genuine concern among the vast majority of the agriculturists we spoke to about excessive regulation and government mandates, especially under the Endangered Species Act. In most cases farmers and ranchers are cautious about giving information concerning endangered species on their property, fearing that if too much information gets out, they risk the possibility of having their right to farm or otherwise manage their land taken away.

We found that in all too many cases, well-meaning government regulations were having the opposite of their intended effects. We heard time after time the fact that it often comes down to providing wildlife habitat at your own risk. One individual said if farmers are threatened with having their right to manage their land taken away by government regulation or mandate, they would rather eliminate habitat on their property altogether. Unfortunately, it's frequently the farmers and ranchers who are making the effort to help wildlife on their land who are falling under the greatest risk of having the right to do so taken away.

We'd like to give credit to those farmers and ranchers who voluntarily strive to preserve wildlife on their property, even if it means risking regulation. We also would like to point out that there are several government agencies and programs that are helping farmers in their efforts, but for many people we spoke with, they are the exception. The majority of farmers and ranchers grow up surrounded by wildlife and the outdoors, and naturally develop a love and respect for their surroundings.

Larry Hyder probably describes it best, "we love the land and the streams and everything that lives here... the world does not understand how people fall in love with the land." This sentiment was repeated over and over again by the individuals we spoke with for this project.



Common Sense Guides

This Farm's Restoration Activities

Bill Eiler grows hay and small grains along the Scott River in Siskiyou county on a farm that his grandfather bought in the 1960's. His farm is home to deer, mallards, wood ducks, doves, and salmon, and the Eilers have taken measures to restore and provide habitat for other species of wildlife as well. Eiler has been involved mainly in bank stabilization projects along the river, including riprap and tree planting projects to slow erosion and provide more habitat for the fish, who like the deeper, cooler pools created by the rocks used in the riprapping. For a while, Eiler says, riprapping projects were quite a challenge in his area because of the idea, held by many environmentalists, that any disturbance of the river banks would be detrimental rather than beneficial for fish. But that attitude is changing as people are becoming aware

Often times the salmon will spawn in the river, only to have the waters dry up and the eggs die. This project, he hopes, will alleviate that problem.

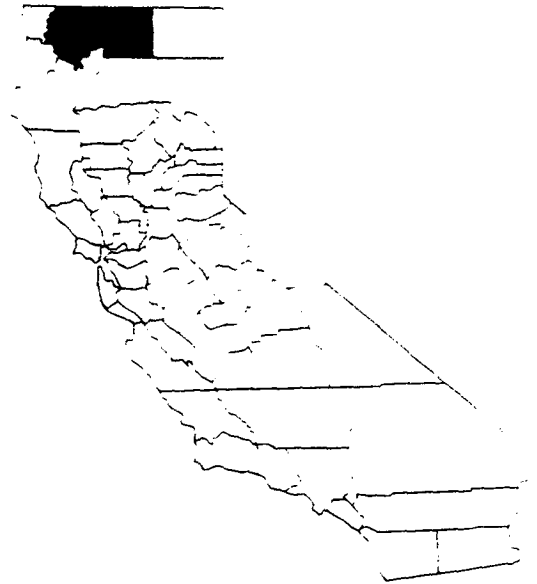
of the success of such projects, although, laughs Eiler, "you could have asked any kid that fished in the river" where it was that the "big fish liked to hang out."

The Eilers also maintain a buffer zone between the river and the land that they farm to help stem erosion. He says that they are particularly careful to use

chemicals that are safe for the wildlife there, and they are very protective of the large trees that help create habitat within the buffer. In addition to these projects, the Eilers have built a pond to help correct drainage problems and capture waste water on their land. Now there is a year-round source of drinking water for wildlife in an area that used to completely dry by April. The Eilers have also developed a pivot irrigation system, which is, says Eiler, "92% efficient" at delivering water to the crop. This conserves both water and energy on the farm.

Eiler is also involved in a valley-wide effort to increase flow down the Scott River through the use of several small check dams, similar to beaver dams. He has put in a request to volunteer his farm as a location for one of these small dams, hoping that it might help hold back enough water through the wetter months to release during the drier months in an effort to keep the Scott River from drying up in the summer, as it often does. This is a problem, he says, because often times the salmon will spawn in the river, only to have the waters dry up and the eggs die. This project, he hopes, will alleviate that problem.

"We're always working with other agencies and trying to do good things" for wildlife, says Eiler, and many of the projects they do are cost-share efforts with State Fish and Game, Resource Conservation District, and others. However, Eiler fears working with government agencies "if they come in here with an attitude of [ex-



Bill Eiler, Siskiyou County

pecting] to tell us what to do." He is afraid that federal mandates would be "more harmful than helpful," predicting that farmers in the area would simply respond by "turning their backs" on them. He says that many of the efforts that he and other farmers are taking part in come down to "trying to stay out of the possibility" of further regulation under acts such as the Endangered Species Act. Remarks Eiler, "we just want to be as safe as we can."

Eiler knows that farmers and ranchers, especially in his area, are "not in it for the money," but rather the lifestyle. As for Eiler, he is motivated to continue in his efforts to help wildlife and improve his land because he's "leaving it for my kids... so [they] can have a chance to do what we're doing if they want."



Commitment to Preservation... A Family Tradition

According to Sam Ordway, the Shasta O Ranch in Siskiyou county was started by his parents in the '50's as "an experiment in conservation." Ordway's father subsequently became president of the Conservation Foundation - set up to promote wise use of the nation's natural resources. Ordway's parents were attempting to bring back a marginal farm and make it productive again through responsible management, calling on the expertise of federal agencies such as the Soil Conservation Service of the Department of Agriculture.

Ordway continues in this tradition and is motivated by "loyalty to my father's efforts starting the ranch... I believe in the balanced use of natural resources, neither their exploitation nor their lock-up."

The Shasta O is a 2,000 acre cow/calf operation that provides habitat for many species of wildlife including deer, bobcats, cougars, bears, porcupines, coyotes, rabbits, ground squirrels, fish, and predatory birds such as red-tailed hawks. Although cougars and bears come through the ranch they "have not been a serious problem due to the natural abundance of prey," Ordway believes. He does not allow hunting on the ranch, adding, "the only things I hunt are poachers." Ordway has set aside 300 acres, from which his cattle are fenced off, exclusively for wildlife. The property's ponds provide additional refuge to a large number of migratory birds including several species of ducks, Canada geese, tundra swans, herons, egrets, and even pelicans. According to Ordway, "the

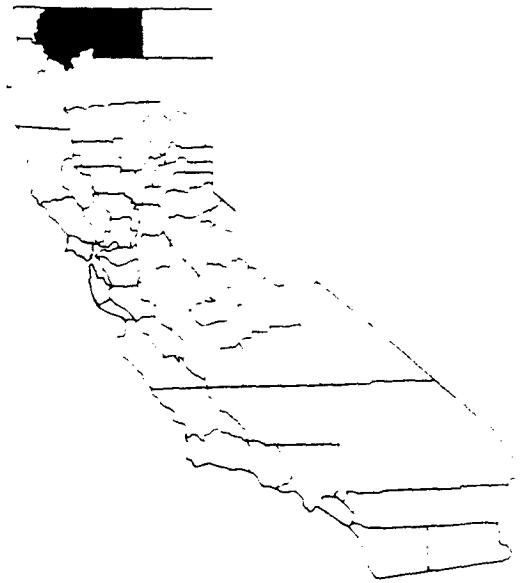
ranch is a favorite site for the local Audubon Society's annual winter bird count."

Ordway has been very involved over the past years in projects to improve the banks of the Shasta River which flows through his property. He would like to encourage more protective vegetation along the river banks, and with the help of state and federal grants has worked to improve the stability of the river banks. Unfortunately, floods during the past three years have seriously damaged these efforts, and Ordway has lost prime grazing land to floodwater, but not nearly as much as he would have lost without his efforts to stabilize the river banks, he says.

Although frustrated, Ordway has con-

Ordway continues in this tradition and is motivated by "loyalty to my father's efforts starting the ranch... I believe in the balanced use of natural resources, neither their exploitation nor their lock-up."

tinued to seek partnership with state and federal agencies in his efforts to re-establish the river banks, but he mentions that he has been forced into a defensive position lately due to proposed land use regulations by federal agencies seeking to enhance fish habitat. He fears that "entering into a contract with any federal agency risks a law suit by extreme environmental organizations and unacceptable restric-



Sam Ordway, Siskiyou County

tions by the contracting agency fearing such a suit." He believes that "the future of cooperative efforts lies in congressional reform of the Endangered Species Act." But until that happens, Ordway says, "I am preparing to take all legal recourse to protect my use of the land against federal mandates." This is a sentiment that is echoed by other landowners throughout the state.

Although Ordway believes that a "sensible compromise can be reached," he feels that it must be with local officials who "are acquainted with local, natural conditions." Ordway has pledged to promote, enhance, and maintain wildlife with or without help or interference from the government.



Long-term Wildlife Commitment Continues

Jim Van Tress, who farms just outside Marysville in Yuba county, grows more than just rice. Since the 1960's the Van Tress farm has managed a permanent wildlife set-aside area on their property in addition to 1,200 acres of rice. The farm is home to many species of wildlife including egrets, black-crown night herons, ducks, deer, and predators. These species take advantage of 400 to 500 acres of permanent ponds and nesting habitat managed by Van Tress, who explains that "we never will farm it... all we do is improve upon it." The area is flooded year-round and supports willow trees, tules, and other water grasses. Nesting sites and plenty of cover have also been established within the area, according to Van Tress.

Along with this set-aside, Van Tress leaves one or two fields out of production each year to provide additional habitat for wildlife. He also floods his fields each winter to furnish feed and cover for migratory waterfowl and other water birds. Van Tress reports that he relies on flooding, and has not burned any of his rice fields for the last seven years, but he occasionally uses controlled-burn methods to clean up his levees and field edges. Van Tress has not yet encountered any problems with disease due to flooding, although he understands that "there is a need to burn in some places." He comments that "so far we've had good results," and adds that rather than burning, rice straw is rolled or lightly disced into the soil,

and then flooded to allow it to decompose. This practice also leaves additional feed for the birds, as it does not destroy the extra seed.

With the exception of the occasional burning, levees and roadsides are left undisturbed to provide cover for feeding and nesting. Egg recovery efforts are also carried out on the Van Tress farm. Van Tress acknowledges that

Since the 1960's the Van Tress farm has managed a permanent wildlife set-aside area on their property in addition to 1,200 acres of rice.

"if a duck can hatch [her eggs] naturally that's best," but if a nest is going to be disturbed for any reason the eggs are collected and taken to a local incubator and hatchery, where they are raised until they are old enough to be released. Van Tress is motivated to manage for wildlife by the appreciation he developed as a child. Says Van Tress, "I grew up around it... My father was always a wildlife manager."

While he believes that "some federal programs would help farmers" by providing assistance to support wildlife and wildlife habitat, he adds, "I believe... people can manage their ranches better than anybody else." He voices concern, as do many farmers and ranchers throughout the state, that government can simply "take over your land" through excessive regula-



Jim Van Tress, Yuba County

tion and mandates. His primary focus is the protection and promotion of wildlife, and he sums it up by saying, "I think that all farmers need to try to manage for wildlife."



Preserving an Example of What California "Used To Be"

Ken Lindauer and his family farm 400 acres of prunes just south of Red Bluff in Tehama county. Part of the farm runs along the Sacramento River, and the Tehama-Colusa canal runs through the middle of the property. The farm is home to abundant wildlife including red tail hawks, ospreys, ducks, turkeys, deer, foxes, possums, racoons, grey and ground squirrels, elderberry beetles, coyotes, and jackrabbits. Lindauer says that he sometimes sees eagles and bobcats on the farm as well, and several species of birds including doves, robins, blackbirds, goldfinches, and owls make

Before irrigated agriculture was developed, Lindauer points out, the land was dry during the long, hot valley summers, and did not support the numbers and variety of wildlife that it does today.

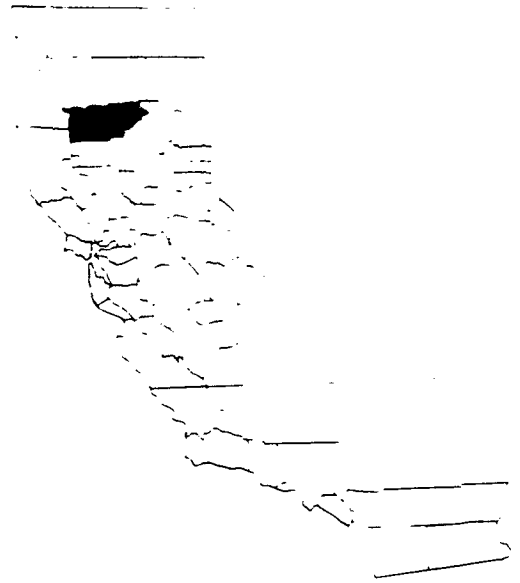
their home in the family's orchards.

Before irrigated agriculture was developed, Lindauer points out, the land was dry during the long, hot valley summers, and did not support the numbers and variety of wildlife that it does today.

The Lindauers have allowed 50 acres of river bottom, which includes a natural slough, to remain wild after having run cattle on it in the past. They want others to enjoy the wildlife on their property as well, and will occasionally allow people to fish, camp, and even ride horses in this area.

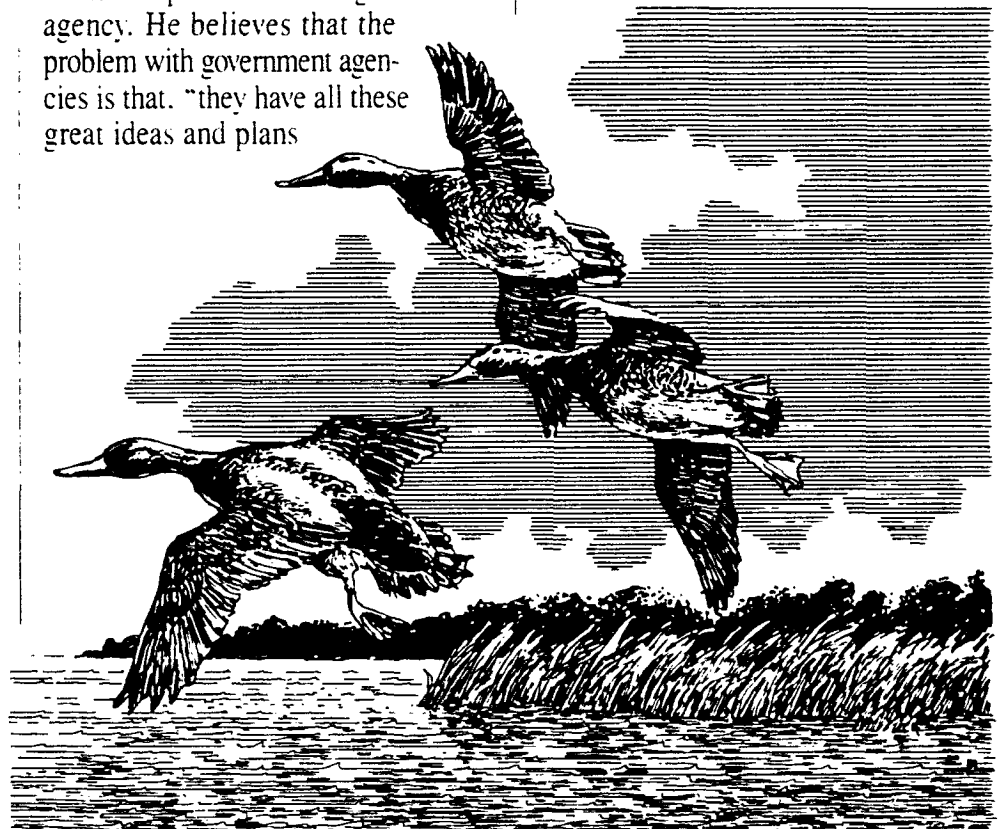
which they refer to as "the jungle." The family would like the area to remain wild because, as Lindauer puts it, he "likes to have an example of what California was like before people got here." In fact, Lindauer mentioned that his family's mission statement for the farm includes the importance of preserving such natural habitat.

Although the Department of Fish and Game and the Nature Conservancy have expressed interest in purchasing the land from the Lindauers, they are reluctant to sell, knowing that "nothing will happen to it" as long as it's in their hands. Lindauer explains that farmers, because they own their land and have the most interest in it, are better able to protect it than a government agency. He believes that the problem with government agencies is that, "they have all these great ideas and plans



Ken Lindauer, Tehama County

[for an area] and they get it and nothing happens." The farmer is the one who pays the taxes on his property, and he's the one who's "interested in what happens to it."



Wildlife Management is Tradition on 150 Year Old Ranch

Dave Fisher, a high desert cattleman, lives and works on a San Bernardino county ranch that's been in operation over 150 years. The ranch is located about 25 miles southeast of Barstow and is home to many species of wildlife including chuckers, three species of quail, two species of dove, red tail hawks, golden eagles, big horn sheep, mule deer, coyotes, foxes, and desert tortoise. Fisher is especially proud of the flourishing population of big horn sheep, which he attributes to his

If plants are not grazed, he says, they become "stagnant and woody." Wildlife avoid those areas and often graze right along with the cattle where the plants are green and tender.

water developments. He also mentions that his ranch is home to the "most viable population [of desert tortoise] in California."

Fisher practices responsible grazing management and comments that the plants and grasses on his land are very productive, thrifty, and vigorous where his cattle graze. If plants are not grazed, he says, they become "stagnant and woody." Wildlife avoid those areas and often graze right along with the cattle where the plants are green and tender. He has also put quite a bit of effort into developing water in the hills and canyons of his ranch. These water sources benefit not only the cat-

tle, but the wildlife populations as well. According to Fisher, "when you develop water you literally develop an ecosystem around [it]." He also notes that some species of migratory animals now migrate through his ranch to take advantage of the water supplies.

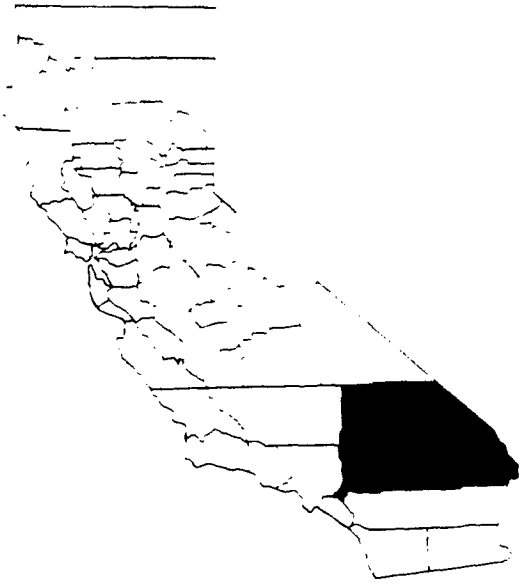
Wildlife populations are thriving on his property, and, adds Fisher, "it's almost evident as soon as you cross the boundaries of our ranch." He is proud of the strong populations of wildlife on his land, but is upset that often government agencies get credit for such successes when it is actually due to the voluntary efforts of farmers and ranchers. Says Fisher, "we live here - this is our life - not only our livelihood but our life." He adds that voluntary efforts like his are simply "all a part of our operation - it's a part of our life... a part of us. It's the way we operate."

When asked about his concerns over regulations, government mandates, and the Endangered Species Act, Fisher replies that he is indeed concerned, "no question about it." He wonders about government mandates, asking, "does

"There's nothing like seeing wildlife do well because of your effort... because of your activities."

that [mandate] mean that the majority of the American people mandate... that someone go out and tell ranchers and farmers what to do with their land?"

But Fisher will continue in his efforts



Dave Fisher, San Bernardino County

regardless of fear of regulation, saying, "there's nothing like seeing wildlife do well because of your effort... because of your activities." But he is also humble in these efforts, commenting, "this nation is so young - what do we know about the environment anyway? It's with the grace of God that we've got what we've got."



Wildlife and Agriculture Both Winners on North Valley Ranch

According to Les Heringer, "Most farmers who live and work on the land enjoy seeing different species of wildlife around them. Whatever I can do to make them a part of the farming operation I will certainly do." On the M&T Chico Ranch in Butte county, which is managed by Heringer, some of those species include the spring-run chinook salmon, a candidate for listing under the Endangered Species Act, wood ducks, sandhill cranes, ospreys, owls, yellow-billed cuckoos, swainson's hawks, deer, several species of turtles, and even a bald eagle, which is a federally listed endangered species.

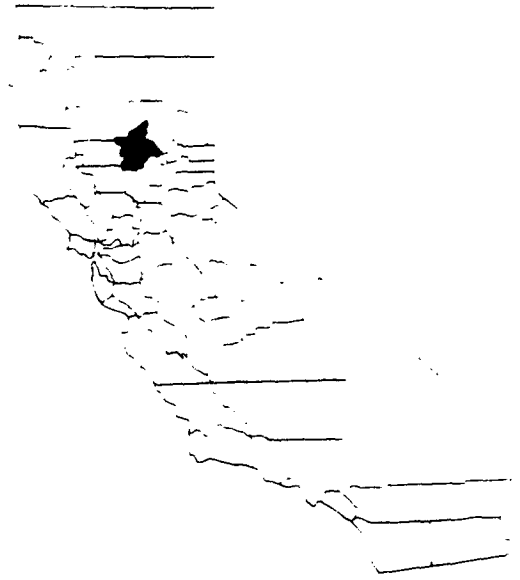
The M&T, located just west of the town of Chico, is an 8,000 acre diversified operation, producing beans, sunflowers, wheat, prunes, almonds, walnuts, safflower, and rice. Included on this tract of land are 1,100 acres of riparian forest along the Sacramento River, 200 acres of wood duck nesting habitat, and 200 acres of wild areas along the ranch's creeks and sloughs.

Heringer has been involved in major fish screen and ladder projects to help protect the spring-run chinook salmon, a species that he says is likely to be listed as endangered in the near future. The M&T diverts water from Butte Creek and pumps water from the Sacramento River, waterways that are also used in the migration of the salmon. With Heringer's active involvement a more "fish-friendly" ladder and screen were constructed at the Butte Creek Diversion site, and a new screened pumping plant was put in on

the Sacramento River. These projects created a win-win situation for both agriculture and wildlife. As Heringer explains, "we are now able to pump and divert water without fear of harming the fish, and without fear of the farming operation being negatively impacted by the ESA."

Other projects on the M&T include a wood duck nesting box project, which is comprised of 40 nesting boxes along 200 acres of Edgar Slough and Little Chico Creek. Heringer's son, Scott, has also been actively involved in this project, helping to build, hang, and monitor boxes. Heringer has been able to pass his appreciation for wildlife and the outdoors down to his children, a heritage that he hopes will continue through future generations. Heringer has put up several owl nesting boxes and plants feed plots of millet, to leave unharvested for the birds during the winter and to provide nesting cover in the spring. He also conducts egg rescues in the wheat fields collecting duck and pheasant eggs from nests before the equipment reaches them. The eggs are taken to a hatchery north of Marysville where they are incubated, hatched, and cared for until they are released back on the ranch. Oak trees are also planted along the farm's waterways to provide habitat for wildlife.

Much of the habitat conservation and species protection occurs naturally on the ranch. For example, sandhill cranes winter on the M&T in the wheat and harvested rice and bean fields. Other bird species, such as the bald eagle and ospreys, take advantage of the



Les Heringer, Butte County

large tracts of riparian areas on the ranch. According to Heringer, "with the proper incentives much more could be done. If this is what the world wants we can do it, but we have a hard time doing it on our own in today's competitive climate... there's only so much you can do out of your own pocket."

Some incentives that could be effective include providing money to flood fields for waterfowl in the winter, build fish ladders and screens such as those now found on Butte Creek and the Sacramento River. Federal mandates, according to Heringer, are more punitive than incentive-based, creating the feeling of "someone holding a gun to your head and telling you to do something. Farmers just don't respond positively to that." He believes that voluntary efforts with incentives are the "best way to go." Or, as Heringer puts it, "One neighbor does it, then his neighbor gets interested... you just have to find the right farmer to get the ball rolling."



Farming and Wildlife Go Hand in Hand

Doug McGeoghegan has been farming rice on Gunner's Field Ranch since 1973, and this will be his sixth year serving as a board member for the California State Fish and Game Commission. His Colusa county farm provides habitat for several species of wildlife, including ducks, geese, swans, egrets, ring-necked pheasants, herons, and many species of raptors. In all, the farm is home to up to 85 different species of birds at various times of the year.

In an effort to provide undisturbed nesting habitat and cover for these species, McGeoghegan leaves hedgerows around his fields and ditch banks. He also leaves some fields fallow and avoids mowing or other preparatory work in them until after the fourth of July, a practice that, according to McGeoghegan, is common to farmers up and down the Central Valley. This allows for duck and pheasant broods to mature and be "up and out" before any work is done in the fields.

In addition to these activities, McGeoghegan also floods his fields in the winter to provide habitat for waterfowl along their migration route. More and more farmers are flooding their fields in order to comply with burning restrictions, a move that is aiding wildlife. According to McGeoghegan, seeing the increasing numbers of wildlife coming to their farms causes farmers to "approach that [regulation] with a little more enthusiasm," and now more than 150,000 of the 500,000 acres of rice land in the Central Valley are being enhanced by

farmers to provide seasonal wetlands for waterfowl. Although not being able to burn as much ground creates some hardship by leading to further expense and more disease outbreaks such as rice blast, McGeoghegan thinks that flooding has been a positive development and says, "it's been a good-news story all the way around."

Flooded rice fields, in addition to providing cover and habitat, provide feed for the birds. Each field, says McGeoghegan, provides 200-300 lbs. of waste-grains and an additional 200-300 lbs. of macro-invertebrates. These provide waterfowl with excellent sources of both complex carbohydrates and protein. These nutrients allow the birds to fly back to their Canadian breeding grounds in "much better con-

McGeoghegan believes that agriculture and conservation can go hand in hand, saying that it's been "proven time and again that they can be compatible."

dition." McGeoghegan does all this because, he explains, "we're trying to propagate healthy and sustainable populations" of wildlife. He feels strongly that leaving nests and feeding habitat undisturbed increases the survival rates of eggs and chicks significantly.

McGeoghegan believes that agriculture and conservation can go hand in hand, saying that it's been "proven time and



Doug McGeoghegan, Colusa County

again that they can be compatible." McGeoghegan, like other farmers, has "always had kind of a conservation bent," and considers himself "extremely fortunate to have this wildlife treasure trove." McGeoghegan says that he's not alone in this belief, and he finds it a "satisfying endeavor" to help wildlife like he does because, according to McGeoghegan, "I can't imagine a world without wildlife."



Managing for Wildlife Proves Economically Sound

Along with managing the 850 acre Yolo Vineyards, Tom Muller and his partners farm 6,000 acres of crops in Yolo county, including tomatoes, bell peppers, corn, cabbage, sunflowers, safflower, wheat, and alfalfa. His farm is home to many species of wildlife, and much of what Muller does is aimed toward enhancing their habitat.

Muller explains that he likes to have nesting habitat on his farm, and he, along with an increasing number of farmers in California, lets his ditches and field lines be covered with grassy vegetation rather than being clean-farmed. In fact, Muller even plants native grasses and trees in these areas and

at the low ends of fields to provide additional cover. Muller also uses Integrated Pest Management (IPM) programs to reduce the need for spraying. He mows his vineyards rather than

However, he's finding that some of these actions, such as mowing rather than discing his vineyards, are making economic sense in the long run. And, says Muller, wildlife numbers are increasing.

discing them, and does insectary plantings which, he explains, are plants that harbor beneficial insects.

All of these practices, according to Muller, have been a learning process. He says it's best to "go slow" because implementing some of these programs can be quite expensive at first. Muller adds, "if you did everything at once you'd go broke."

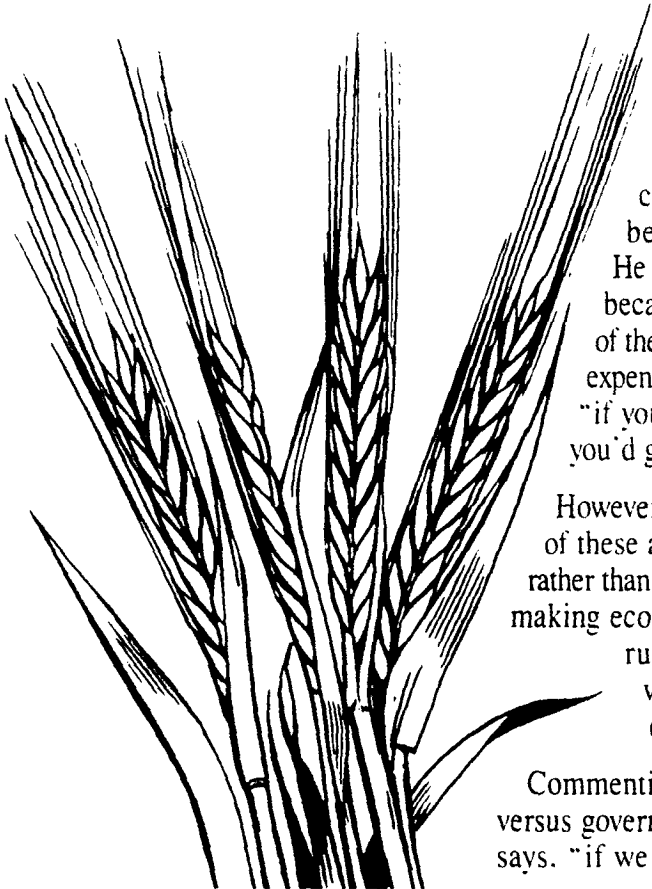
However, he's finding that some of these actions, such as mowing rather than discing his vineyards, are making economic sense in the long run. And, says Muller, wildlife numbers are increasing.

Commenting on voluntary actions versus government mandates, Muller says, "if we don't start [protecting



Tom Muller, Yolo County

wildlife] ourselves and be good stewards of the land it will all be mandated... I don't need a government agency to tell me what I need to do." He hopes that programs such as his will eventually be held up by the government as models for others to follow in implementing voluntary conservation measures. Then, he says, "maybe the government will see that we're trying to do the right things, and support our efforts."



Love For The Land Inspires Forester's Wildlife Commitment

Larry Hyder owns and manages several stands of Christmas trees and timber land in El Dorado county. He also operates a catch and release fly fishing program. His property is home to many species of wildlife including deer, bears, mountain lions, foxes, coyotes, raccoons, rabbits, turkeys, and trout. Hyder has worked extensively on stream improvement on his home property as well as several other streams on separate lands. He says that it's "fun to show our place as an example of what can be done." He adds that "we have a motto that we've always had and always will have as long as the good Lord gives us the opportunity to manage these things: leave it better than you found it."

This motto carries through to Hyder's everyday management practices. He does prescribed burns to help clean out and revive the land. He explains that these burns allow for the old, woody vegetation to be cleaned out encouraging new, tender vegetation and wildflowers to grow in. They also serve to burn out old, diseased stumps. This keeps disease and fungus from spreading, as well as providing new burrows for frogs, lizards, and snakes. He also says that as leaves, needles, and soil eventually fill up the holes left by the burned out stumps, "the finest growing medium in the world" is created. The fires, of course, also help recycle nutrients back into the soil. According to Hyder, "prescribed burning is the key... it's one of the most important things for wildlife."

Another thing that Hyder is heavily in-

volved in is maintaining and creating stream habitat for fish. He comments on the fact that fish need to have deep pools to stay cool, as well as the more shallow gravel bars to spawn. He continuously cleans the trash and debris from his streams and hauls in gravel to make sure that there are enough pools and spawning beds for the fish, especially after large storms and floods, which can cause considerable damage to the streams. He is motivated to do these things because, he says, "we love the land - we love the land and the streams and everything that lives here."

"People have no idea what [ranchers] go through... what they do in their everyday lives... to protect wildlife."

Hyder is disappointed that "the world does not understand how people fall in love with the land." When people who are unfamiliar with his efforts to help wildlife question his motivations, he says, "that hurts me more than anything." He adds that, "people have no idea what [ranchers] go through... what they do in their everyday lives... to protect wildlife." Wildlife populations in his area have been increasing "unbelievably," says Hyder. This is no doubt due in large part to the efforts of Hyder and others to build and maintain wildlife habitat. He enjoys having other people come enjoy the wildlife on his property, and each year a group of physically challenged kids come out and spend the day fishing on his ranch.



Larry Hyder, El Dorado County

He explains that his motto includes people as well. He wants to leave things better for his children, for his neighbors, and for anyone else who is touched by his efforts. Says Hyder, "it's a philosophy - it's a way of life."

Hyder is concerned that often, well meaning restrictions can get in the way of people's efforts to help wildlife by causing unnecessary headaches, waiting periods, and paperwork. Says Hyder, "regulations are a curse to the people who genuinely want to help." He thinks that voluntary actions are the best way to approach helping wildlife. "People don't want to be told what to do... that's the key to it - you have to do it because you want to do it."

Hyder fears that he may sound "old fashioned" when he talks about his desire to learn about God's creation and "why it was so beautiful and why it was so good." Hyder simply wants to keep this process going as he continues in his efforts to protect and promote wildlife.



Farm Helps Community Preserve Wildlife

Charley Mathews was one of the first people to pioneer the use of rice rollers on his Yuba county farm just northeast of Marysville. The farm, which was bought by Mathews' great-grandfather in 1860, is located in an area known as District 10, a region noted for its waterfowl populations. The rice roller is used on the operation to incorporate rice straw into the soil after harvest, allowing for easier breakdown and helping to establish artificial wetlands for migrating waterfowl. Some of the 70 different species that frequent Mathews' ranch include great blue herons, egrets, ducks, geese, shorebirds, and even bald and golden eagles.

Mathews floods his rice fields after harvest around the first of October, and he leaves the water on until early March, allowing adequate time for the later-migrating species to stop and find rest and feed on the farm. Flooding the fields also encourages populations of invertebrate species that provide a source of protein for the migrating birds. Although Mathews was con-

cerned at first about the risk of disease, he hasn't burned any of his fields in seven years, and reports that there have been no problems associated with the flooding since that time. Mathews' neighbors are involved in similar ef-

The people in his community, according to Mathews, recently came together to build an egg hatchery, putting up the money themselves. Mathews and his neighbors now conduct "egg rescues" in their fields before harvesting them, saving, hatching, and releasing 25,000 to 30,000 birds each year for the last five years.

forts and he adds that both he and his neighbors are able to do it without government assistance.

The people in his community, according to Mathews, recently came together to build an egg hatchery, putting up the money themselves. Mathews and his neighbors now conduct "egg rescues" in their fields before harvesting them, saving, hatching, and releasing 25,000 to 30,000 birds each year for the last five years. These efforts are having an effect on wildlife populations. Mathews, who has hunted in the area for 55 years, or "since my dad used to carry me out on his shoulders," comments that in the last 10 to 15 years



Charley Mathews, Yuba County

he has seen species of birds that he'd never seen there before, such as golden and bald eagles. He also believes that the populations of some of the more uncommon species including egrets and herons are growing as well.

Mathews likes to take people for bus tours on the farm so that they too have an opportunity to enjoy the wildlife that makes it their home. Says Mathews, "I'm interested in wildlife and it's part of our stewardship of the land to make it better than we found it."



Tradition of Wildlife Preservation Includes Responsible Management

Philo and Gloria Barnwell and their family are continuing a 115-year tradition on their 9,000 acre cattle and timber operation 35 miles east of Fortuna, in Humboldt county. While 6,500 to 7,000 acres of the property have been devoted to timber for the last 50 years, the Barnwell family continues to raise

"We are thankful to live in an area where things naturally flourish," says Barnwell, and "we take care of what we have."

cows and calves on the remaining 2,000 to 2,500 acres of open country. The entire sustainable operation provides a home to large numbers of diverse species of wildlife, including golden eagles, peregrine falcons, turkeys, ospreys, kingfishers, hawks, valley and mountain quail, grouse, wood ducks, pileated woodpeckers, deer, bears, coyotes, mountain lions, bobcats, racoons, squirrels, tree voles, and salamanders.

To help promote the populations of such wildlife on the property, and particularly in the timber areas, the Barnwells practice very careful harvesting and maintenance techniques. For example, they will not harvest areas that are used for nesting during the nesting season; and while clearing brush and maintaining the property, areas used for nesting are avoided and left undisturbed. Says Mrs. Barnwell, "we try to log carefully so that wildlife isn't hurt or damaged." The Barnwells

encourage wildlife even around their home, where they've hung wood duck nesting boxes and the deer have been known to eat roses off the front porch.

"We are thankful to live in an area where things naturally flourish," says Barnwell, and "we take care of what we have."

The property includes a high cave that serves as a popular nesting site for peregrine falcons, a species listed under the Endangered Species Act. The Barnwells have been a bit frustrated with the actions of governmental agencies concerning that cave. According to Barnwell, the government promised them they would only impose "minimum" restrictions on their logging activity, but what happened in reality was a six month, \$250,000 setback to their operation. Spotted owl regulations cost them an additional \$250,000, and still the owl commands 72 acres and \$200,000 of timber on one harvest plan. This intrusion frustrates them, because they have been responsibly logging their property for years, and wildlife populations, including peregrine falcons, are flourishing. Barnwell sums it up by saying, "I don't think the federal government is taking care of the federal land. Our example is better than their example. They aren't doing good enough a job themselves to tell us what to do."

Wildlife, to the Barnwells, is considered a part of the ranch, and, "we do what we are allowed to enhance wildlife habitat." When asked what they could do for wildlife given an



**Philo and Gloria Barnwell,
Humboldt County**

incentive program, Barnwell replied, "We're [already] doing all we can." She comments that, "some of the forest practice rules inhibit and discourage wildlife habitat enhancement," and her family is discouraged by the in-

"They aren't doing good enough a job themselves to tell us what to do."

creasing levels of regulation and taxes. She believes that a tax break would help them repair streams damaged by the recent floods and, referring to the rising taxes and regulations she adds, "we need some incentives because it's getting bad - it's hard to pay everyone."



Southern California Rancher Provides Refuge for Wildlife

William Tulloch and his wife have operated a cattle ranch in eastern San Diego county for most of their lives, and according to Tulloch, his wife's family has been in the business for over 100 years. The management of the ranch reflects the Tulloch's desire to see wildlife prosper there, and they believe that most of the ranchers in their area feel the same way doing what they can to leave wildlife undisturbed. Some of the species that they see on the ranch include bobcats, coyotes, mountain lions, badgers, ground squirrels, possums, deer, quail, doves, road-

Farms and ranches provide habitat for displaced animals, says Tulloch, "we enjoy having them around. They're part of the natural scheme of things."

runners, and golden eagles. Woodpeckers and starlings use the Tulloch's yard to nest in.

Tulloch uses prescribed burns to keep the land open and to allow new grass to grow, which benefits not only the cattle but the wildlife populations as well. He also keeps his windmills running on sections of land that have already been grazed. He says "I do this mainly for the wildlife," allowing for a constant supply of water for the animals after the natural springs have dried up. He would like to do more to control

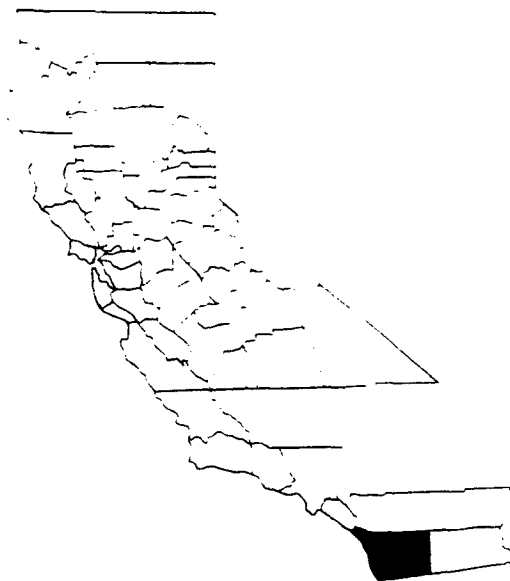
the mountain lion population because of their significant effect, especially recently, on the deer population. However, he says that he's only able to get depredation permits to trap them if one is found killing a calf. This is frustrating because according to Tulloch, "the deer population has really suffered."

Tulloch believes that larger parcels of land like his provide a "refuge" for wildlife. He has seen the pressures that the general public puts on the wildlife habitat on public lands and state and national parks, and he says the wildlife has to either "move or die out." Farms and ranches provide habitat for displaced animals, says Tulloch, "we enjoy having them around. They're part of the natural scheme of things." He is discouraged by the management of public lands, especially in his area, commenting that "the quality of the public lands has deteriorated drastical-

He would like to do more to control the mountain lion population because of their significant effect, especially recently, on the deer population.

ly in the last 40 years or so." He believes that this is due to the "no-burn policies" and other similar management practices.

Tulloch is opposed to the use of federal mandates, believing them to be



William Tulloch, San Diego County

"crutch" to control private land. He will continue in his voluntary efforts to promote wildlife on his ranch, simply because he likes to see wildlife. He acknowledges that, "I'm just a rancher, but farmers and ranchers are the original environmentalists."

Farm Serves as a Community Leader in Wildlife Preservation

Lundberg Family Farms, located in Butte county near Richvale, consists of 3,150 acres of prime rice land. It is also home to literally hundreds of species of wildlife including ducks, pheasant, geese, bald eagles, hawks, coyotes, foxes, herons, egrets, stilts, seagulls, and cranes. Lundberg Family Farms is well known in the area for the importance they place upon preserving wildlife, and as Gordon Brewster, Vice President of Production, explains, "we've really taken interest and enjoy doing it, and don't mind putting extra resources and manpower into it."

Upwards of 2,500 acres of the farm are planted into rice each year and of that, 1,200 acres are devoted to growing or-

In fact, several of Lundberg Family Farm's neighbors are involved in that program and use their incubator to hatch the eggs found on their own farms. This, of course, is a great example of the agriculture community coming together in support of wildlife.

ganic rice. This is an important marketing strategy for the farm, but according to Brewster, "up to this point we haven't really observed too much of a difference" between the areas that are farmed organically and those that are farmed traditionally as far as attracting and harboring wildlife goes.

Lundberg Family Farms is actively in-

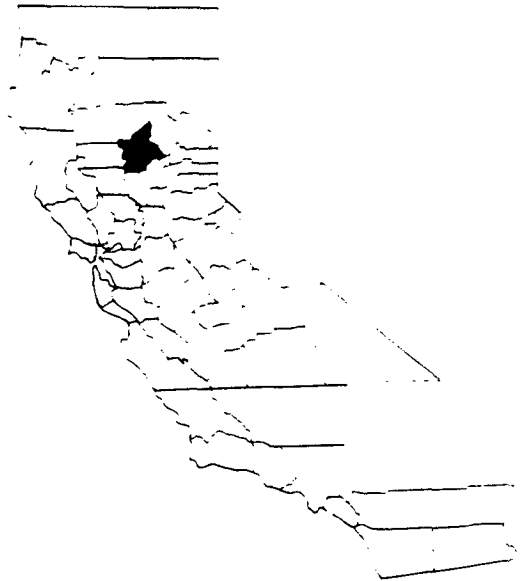
involved in gathering duck and pheasant eggs from fields during harvest. According to Brewster, each equipment operator is instructed to gather eggs from any nests that might be in their path. Over the years, approximately 30,000 eggs have been collected from the farm and hatched in incubators.

In fact, several of Lundberg Family Farm's neighbors are involved in that program and use their incubator to hatch the eggs found on their own farms. This, of course, is a great example of the agriculture community coming together in support of wildlife.

About his voluntary efforts to help promote and preserve wildlife Brewster says, "we're doing...everything that we can," and "we'd be more than willing to cooperate with Fish and Game if they asked us to. We're always open for suggestions. We encourage and would be happy to discuss any additional efforts we could [do] to aid the survival of waterfowl and wildlife... we'd be happy to do it."

When asked about his views on voluntary efforts to preserve wildlife versus government mandates Brewster answered, "I'm not too much in support of federal mandates." He believes that "some bureaucrat makes these decisions and they don't even know what we're dealing with... I'd like to see that limited." But so far, he added, his area hasn't been too heavily impacted by such mandates as of yet.

As for now, Brewster thinks that, "most rice farmers are willing to volunteer anything that's brought to their atten-



Gordon Brewster, Butte County

tion as far as promoting and caring for wildlife." And that's just what it comes down to for farmers like Brewster, who sums it up by saying, "we do everything we can to protect them."

Turning a Christmas Tree Farm into a Wildlife Refuge

Craig Ferrari purchased several acres north of Auburn in Nevada county 18 years ago, and uses it to grow retail, wholesale, and choose & cut Christmas trees although he confesses that his first love is wildlife. After buying the property, the first thing he did was build a small, one-acre pond right in the center of it, explaining, "as they say, you build it, they'll come." He's also involved in several other projects to attract wildlife to his farm.

Working with the California Waterfowl Association and Cornell University, Ferrari has installed 120 nesting boxes on his small farm for grey squirrels, bats, wood ducks, barn and screech owls, western bluebirds, and sparrow hawks. He says that one out of every ten Christmas trees has a songbird nest in it, and 500 wood ducks and 120 Canada geese are raised on the farm each year. Some of the other species of wildlife on the property include quail, turkeys, deer, coyotes, bobcats, and cougars.

On his farm, says Ferrari, "everything's been designed around [wildlife]."

Each year Ferrari plants "food plots" consisting of wheat, barley, vetch, rye, and peas for his birds. According to Ferrari, "the food plots keep the animals close," giving them a "safe place to raise their young." Ferrari himself was raised in the city and he says simply, "I didn't like it there." An avid hunter, he enjoyed seeing wildlife during the hunting season, and he "wanted to see it year-round." With the exception of the deer population which

he hunts to control, "nothing gets hunted" on his property now, "except with a camera." Says Ferrari, "I'm doing this for the love of wildlife."

In addition to these efforts, Ferrari creates brush piles to provide cover for birds, and maintains wetland, nesting, and brood areas. He also plants clover in his tree plots to help control erosion and recycle nitrogen back into the soil. All of these efforts are voluntary, and Ferrari and his wife, Leslie, supply all of the labor and resources to make it happen. Although expensive, he reports that "it's been worth it," although "it doesn't happen overnight."

Ferrari is also involved in a 320 acre project near Woodland, where he and

*On his farm, says Ferrari,
"everything's been designed
around [wildlife]."*

the landowner, working closely with several government agencies, would like to turn the farm into a permanent wildlife refuge. But, according to Ferrari, they are often hesitant to take action and risk losing the right to farm the property in the future. For example, Ferrari would like to flood an area to create a pond for wildlife, but he is afraid to keep it flooded for over five years. After five years, the government will take away the right to farm it again, saying that the area was now considered a permanent wetland. A concerned Ferrari comments, "that's not something I agree with when we're working to improve things and [the gov-



Craig Ferrari, Nevada County

ernment] comes in and dictates that, you can't farm this anymore." Says Ferrari, "they shouldn't be able to dictate how you run your farm."



Wildlife Commitment Inspired by Future Generations

Don Brazil owns a 460 acre hay and cattle operation just outside of Fort Jones in Siskiyou county. He bought the ranch in 1970 and since that time has made major efforts to improve wildlife habitat, particularly along the one mile stretch of the Scott River that runs through his property. When he bought the ranch, Brazil recalls, it had "no habitat at all," because each year the river would come up and wash away the rich soil along its banks, leaving the bare gravel underneath it exposed. Brazil began rip-rapping and planting the banks of the river in an effort to keep the soil in place. Although at first he worked with federal agencies, he quickly grew tired of the "headaches and paperwork" that were involved. He and his wife decided to do it themselves from then on, and using their own resources they have been able to "get the job done."

Today, says Brazil, the river is "nothing but habitat," with golden willows reaching out 25 feet over the water. "Back in the 70's we didn't even have a rabbit here," says Brazil, but the ranch is now home to bears, mountain lions, salmon, deer, geese, ducks, and many other species of wildlife. They'll see thousands of the geese in the winter, and 200 to 300 even stay in the valley during the summer. Many of them take advantage of the two ponds that are found on the ranch. The Brazils don't allow hunting or fishing on the ranch.

The Brazils use pivot irrigation, which conserves water and energy, and they are careful not to disturb nesting sites

as they graze their cattle under a management plan that is designed to promote the health of the land. Riparian zones are fenced and grazed separately from the pastures to ensure the stability of the river banks. Each year the California Department of Fish and Game does a fish count up in the Scott Valley, and Brazil is proud of the fact that over the last 10 to 12 years his stretch of the river has had among the highest counts.

All of the actions Brazil has taken to help wildlife and habitat have been voluntary. He believes that, "the only way

Instead, Brazil relies on "common sense and current agricultural technology" to enhance wildlife habitat on his ranch.

you'll get anything done today is through voluntary action." He also believes that, "in this area government mandates aren't going to work. We don't want the government trespassing on our property... we don't want the government telling us what to do." Instead, Brazil relies on "common sense and current agricultural technology" to enhance wildlife habitat on his ranch. He explains that, "farmers are a different breed - they don't want anyone telling them what to do, especially when they're paying the bill."

The Brazils are motivated to preserve the health of their ranch by the desire to "pass this land on to the kids and



Don Brazil, Siskiyou County

grandkids... it's just part of good stewardship, I believe." He thinks that most farmers and ranchers feel the same way, and he says that, "you don't want to pass on a headache - I'd sure like to pass on something better than I found it."



Management Decisions Reflect Commitment to Stewardship

Nathan Carver is a fifth generation rancher on a Kern county ranch that was started in the 1870's. He runs 300 cows on his cow/calf operation north-east of Bakersfield. The land is fairly arid with no perennial streams and just a few springs for the cattle, but still the ranch is home to many species of wildlife, including deer, turkeys, quail, skunks, racoons, possums, bobcats, squirrels, and coyotes.

As Carver puts it, land that is managed properly for cows will naturally be managed properly for wildlife as well.

The Carvers work closely with the Department of Fish and Game to help

As Carver puts it, land that is managed properly for cows will naturally be managed properly for wildlife as well.

keep predator populations down in order to keep other populations, like deer, up. Carver also says that they are isolated enough to be able to watch carefully for poachers. He believes, though, that "out in the rural areas man really has a pretty small effect on wildlife." He explains that in urban areas wildlife comes under pressure from development and on federal lands wildlife is pressured by recreation, but in rural areas wildlife is pressured by "natural forces" such as disease and drought.

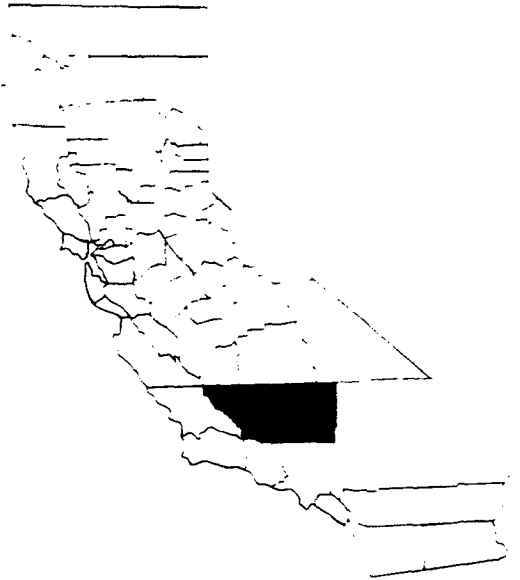
"The key word is stewardship," says Carver. "God has given us this land to

take care of it." He believes that if the government and environmental groups "true motivation" was to preserve wildlife, they would work with farmers and ranchers rather than against them. As for endangered species, Carver remarks that, "if you have them on your land you're punished for it." He believes that this harms such species, because farmers and ranchers are "no longer motivated to have them" on their land. Too often the philosophy, as he puts it, is "if you don't have some of these critters they'll look somewhere else and leave you alone." He comments that ranchers are often punished for good stewardship rather than rewarded.

Carver cites benefits of properly managed land, referring to his use of public lands, which make up a part of his operation. He feels that there are four key benefits: stewardship, or the fact that he takes care of public lands as if they were his - he wants his children

"If you have them (endangered species) on your land you're punished for it." He believes that this harms such species, because farmers and ranchers are "no longer motivated to have them" on their land.

to be able to ranch there, too: fire protection, the idea that grazing cattle on public lands keeps brush down and the risk of fire low; biodiversity, the fact



Nathan Carver, Kern County

that when grass is grazed properly brush is kept down and good species

He believes that, for farmers and ranchers, "there's a love and a pride and a care for the land we have that a government agency will never have."

of grass are allowed to flourish: and a buffer zone between public lands and urban development. In order to keep his lease to graze cows on public lands, Carver must own land of his own. This privately owned land provides a buffer between urban development and public lands, which keeps wildlife from being pushed that much farther away in their efforts to avoid development.

According to Carver, "the good of the species is our main goal." For his family, there is pride in owning land that is home to wildlife. He believes that, for farmers and ranchers, "there's a love and a pride and a care for the land we have that a government agency will never have."



Fifth Generation Farmer Considers Benefits of Helping Wildlife

Charlie Rominger's family has been farming in Yolo county for five generations, or since his great-great grandfather came to California. Rominger still farms with his family on land that was purchased by his grandfather in the 1930's. Together they farm about 4,000 acres of corn, tomatoes, alfalfa, wheat, sunflowers, safflowers, beans, and rice, but their farm is also home to wildlife including ducks, geese, pheasants, turkeys, doves, deer, coyotes, muskrats, foxes, hawks, and owls. Many of the things that they do on the farm, according to Rominger, benefit not only their agricultural operation but the health of their land and wildlife populations as well.

Rominger stresses the fact that wildlife benefits from responsible farming practices, even if no projects are implemented solely for wildlife. The Romingers are involved in several projects that help with flood and erosion control, groundwater recharge, and decomposing rice stubble. These same projects also happen to benefit wildlife tremendously. For example, the Romingers have been involved in efforts to plant roadways and ditch banks with perennial grasses. These grasses provide excellent cover for wildlife while greatly aiding in erosion control. They have also put in around 15 to 20 foothill ponds on the farm, starting with the first ones put in by his uncle when Rominger was "a little kid." These ponds not only provide flood control and groundwater recharge, but nesting and feeding habitat for various species of waterfowl as well. The Romingers

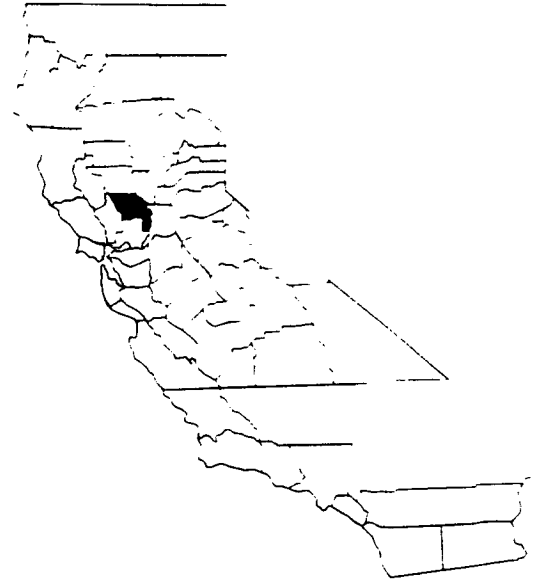
flood their rice fields to decompose the stubble in the winter, again providing habitat for waterfowl.

These practices have led to increasing numbers of wildlife. Says Rominger, "we never used to see geese around here... now we see them almost year-round." Other populations are increasing as well, and according to Rominger, "we see ducks by the hundreds where as before you'd see a duck in an irrigation ditch every once in a while." In some cases the Romingers used cost-share programs to develop their ponds, but for the most part they've done it on their own. Rominger explains, "even though [most cost-share

Wildlife benefit from responsible farming practices, even if no projects are implemented solely for wildlife.

programs] try to be user-friendly, most farmers would rather not have to bother with the paper work."

Rominger mentions other hindrances to such projects as the need to obtain permits for "everything." He recalls that in one application process they were told that they'd have to wait six months when it actually turned out to be two and a half years. The Romingers put in ponds at the rate of one to two per year, not including those they put in for neighbors. Nonetheless, implementing these projects takes time, labor, and equipment. Says Rominger, "it'll take us another 20 years" to plant all the grass strips they want, put in all



Charlie Rominger, Yolo County

the ponds they would like, and continue developing other programs such as the use of beneficial insects and silt traps. But, he explains, "there's going to be tremendous money savings over the years as we get these things implemented."

All of the work the Romingers do to benefit wildlife is done on a voluntary basis, and as for his views on government mandates Rominger believes voluntary efforts are the way to go. When the government mandates certain actions, what often happens is that they slam down a law... and make enemies." He believes that "incentive programs are probably some of the best money the government spends."

Rominger says that he enjoys seeing the numbers of wildlife coming to the farm, and he is excited about the way "everything works together" as his family implements and carries out programs to benefit the operation, wildlife, and the environment. As he puts it, "the more tie-ins, the more benefits, it just keeps snowballing."



Positive Efforts Guide This Ranch's Operation

Herb Jasper's hay and cattle ranch is located just south of the Oregon border in Modoc county. It includes sections of Lassen and Willow Creeks, which feed into the nearby Goose Lake. Jasper says that he tries to make management decisions that will benefit and improve all aspects of his ranch, including wildlife. He refers to this philosophy as "total resource management." The ranch is home to populations of mule deer, antelope, elk, geese, ducks, pheasants, quail, and at least eight species of fish. Predator populations, including mountain lions and coyotes, are also large.

Jasper is involved in several efforts to help wildlife on his ranch and in his community. He is currently serving on a committee that is designed to deal

"If we take care of ourselves and our land maybe in the future there won't be so much pressure" as far as regulations are concerned.

with management decisions concerning the thriving population of elk in the area. He is also involved in efforts to protect the red band trout, a species that has been proposed for listing under the Endangered Species Act.

With the help of Fish and Game he is establishing vegetation along the banks of both creeks, and he is using rock wings to control erosion and provide pools for the trout. Along with these efforts he has put in "fish-friendly" di-

versions, and is planning to install one in the near future that will present "no obstacle at all" to the fish, as it diverts water from a deeper level in the creek and leaves the surface undisturbed. He hopes that his efforts will "preempt any regulations coming down the pike" concerning the red band trout.

In addition to the work Jasper has done and is doing in the streams themselves, he has fenced off two miles of riparian zones which he uses as a "management tool" in his ranching operation. He grazes his cattle in the areas for short periods of time, allowing for new growth, and he has put in watering tanks for his cattle.

These areas also contain nesting sites for geese and Jasper says that he's tried to make the fencing itself "friendly to deer and antelope" by putting smooth wires along the tops to keep them from getting hung up if they try to jump them. Surprisingly, though, antelope are more likely to crawl beneath the fences than jump them like the deer do, so Jasper has actually raised the level of the lower wires to allow for easier access.

Because of his efforts and those of other ranchers in the area, Jasper is reporting "exploding" populations of red band trout and other species of wildlife. Because of these types of success stories, Jasper hopes that, "if we take care of ourselves and our land maybe in the future there won't be so much pressure" as far as regulations are concerned. Jasper wants to pass his ranch on to his children, but he knows that,



Herb Jasper, Modoc County

"we've got to take care of the land... if we don't take care of it we'll lose it."

"Sometimes," says Jasper, "we don't blow our own horn enough" about the good things ranchers are doing to help wildlife. He is concerned that such voluntary efforts are not receiving adequate attention, and "that's one of the major emphasis that we continue to put forward... we accomplish more through a voluntary effort than a mandatory effort." He says, "I don't think I'm much different than the majority of ranchers in this area." Jasper and his fellow ranchers are motivated to help wildlife simply because "they enjoy being in the outdoors and seeing wildlife in the outdoors."

Cooperative Efforts Pay Off For Wildlife

The 17,500 acre Conaway Ranch, located between Davis and Woodland in Yolo county, is actually farmed by about 25 different farmers. Local farmers lease the land for crops including rice, corn, tomatoes, alfalfa, safflower, and sugar beets. The Conaway Ranch itself was bought nine years ago by PG&E Properties (not Pacific Gas and Electric, as many people think), and their partners. According to Wildlife Manager Mike Hall, "nine years ago there wasn't a blade of grass here." PG&E Properties and their partners decided to make a concerted effort to restore wildlife habitat and populations, and over the last nine years they have achieved some incredible successes. Hall is very proud of the progress that has been made.

From the roadways and ditch banks to the nesting fields and tree lines of native oaks, almost every square inch

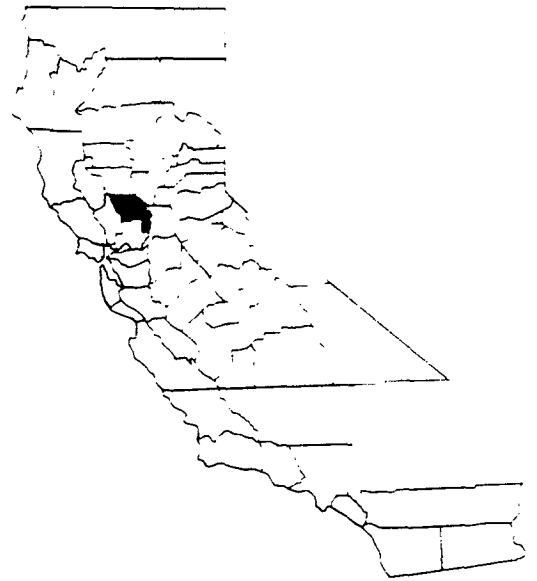
From the roadways and ditch banks to the nesting fields and tree lines of native oaks, almost every square inch of the ranch is a paradise for wildlife.

of the ranch is a paradise for wildlife. What is especially significant about this particular ranch's efforts is the fact that it involves the cooperation of some 25 individual farmers, the Conaway landowners, and agencies such as California Waterfowl Association, Wildlife Conservation Board, Ducks

Unlimited, Fish and Game, U.C. Davis, and the Fish and Wildlife Service. These agencies and individuals, through cooperation and a willingness to try new things, have provided a refuge for countless species of wildlife.

From the start, the Conaway Ranch did away with "clean farming," says Hall, allowing vegetation to closely hedge in roads and field edges. The ditches and canals are also thick with vegetation. If the vegetation becomes too dense, impeding water movement, only one side of the ditch will be cleaned at a time, ensuring that there will be continuous cover for wildlife. Allowing this cover to grow, remarks Hall, creates "incredible corridors for pheasant, cottontails," and other species. Birds and small animals can be seen diving into the vegetation on the roadsides as vehicles pass, while broods of waterfowl including wood ducks, take cover in the reeds and cattails growing in the waterways.

Hall comments that fallowed fields are typically disced up and cleaned regardless of whether or not any crops will be put in. This is not done on the Conaway Ranch, where fallowed fields are left completely undisturbed in order to provide secure nesting habitat. Fallowed fields are often left in the middle of large areas of alfalfa, rice, and other crops to provide nesting cover. These nesting fields provide immediate alternative sites for hens looking to relocate their nests when they've been disturbed by normal farming activities. Hall describes one small, triangular



Mike Hall, Conaway Ranch

field surrounded by larger fields of alfalfa that has 108 nests in it. Many of these nests were established by hens

These nesting fields provide immediate alternative sites for hens looking to relocate their nests when they've been disturbed by normal farming activities.

that had actually nested in that same field for each of the past three years, showing that wildlife continues to come back to the Conaway Ranch, and often to the exact field.

"Hen-flushing" and egg rescue activities are also common during harvest on the property, says Hall, who describes a device that they provide to each of the farmers on the ranch that is used to scare, or "flush" hens from their nests before the equipment reaches them. It is comprised of bars, hung with bells, that reach out 14 feet in front of the harvesters and swathers.



This creates enough noise and distraction to scare away the hens, who instinctively do not want to leave their nests. This keeps the hens from being injured or killed by swather blades and other harvesting equipment. In addition, once a nest has been located us-

The areas are flooded and dense vegetation is encouraged to grow around the edges to provide cover for black-necked stilts, egrets, ducks, and other species of shorebirds and waterfowl.

ing these hen-flushing devices, the eggs are gathered and taken to hatcheries like Daryl Daley's in Live Oak. Here the eggs are incubated and hatched, and the chicks and ducklings are cared for until they are mature enough to be released.

The Conaway Ranch has implemented two cost-share projects with the California Waterfowl Association and the Department of Fish and Game, both consisting of "brood ponds" that harbor waterbirds and waterfowl as they raise

their young through the months of April to August. Several other ponds are located throughout the ranch on areas of poorer soil. The areas are flooded and dense vegetation is encouraged to grow around the edges to provide cover for black-necked stilts, egrets, ducks, and other species of shorebirds and waterfowl. Some of the ponds are actually flooded year-round to provide brood pond habitat during every month of the year. These ponds are surrounded by nesting fields and teem with wildlife. Along with the brood ponds, Hall indicates that 3,000 to 6,000 acres of fields are flooded each winter for migratory waterfowl.

In addition to all of these projects, Hall describes an area of wood duck nesting habitat along a canal lined with native oaks. Wood duck hens nest in the boxes set among the trees, and their ducklings take cover in reeds growing along the water's edge. According to Hall, approximately 50 wood duck nesting boxes have been established. On the other side of the road egrets can

be seen taking flight over the rice fields, and further into

the ranch a group of pelicans inhabits the by-pass. Hall explains that "farmers... are the best stewards of the land there are."

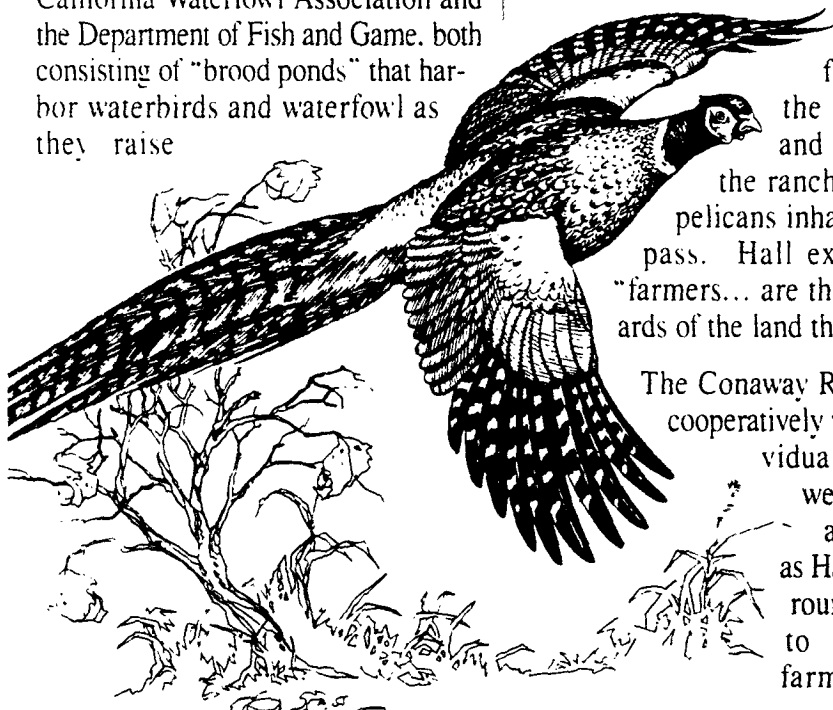
The Conaway Ranch works cooperatively with its individual farmers as well as several agencies, and as Hall makes his rounds he stops to chat with farmers and

agency workers like Dan Loughman of the California Waterfowl Association, who with his dog, Taxi, checks on the nesting fields. It is obvious that the efforts to promote wildlife, maintain 500 acres of brood ponds, and provide 2,000 acres of nesting cover on the Conaway Ranch are cooperative, and Hall adds that the sentiment of the farmers on the Conaway is that, "farming might as well benefit wildlife" rather than harm it.

"I just like wildlife," says Hall, it's important to "be good stewards of the land... [most farmers] appreciate that not everything's a dollar bill." Hall stresses the fact that most farmers have grown up on the land and have devel-

Hall stresses the fact that most farmers have grown up on the land and have developed a love and appreciation for wildlife. But, he cautions, farmers are not going to want to set aside areas and go out of their way to help wildlife if their land will be taken away from them because of it.

oped a love and appreciation for wildlife. But, he cautions, farmers are not going to want to set aside areas and go out of their way to help wildlife if their land will be taken away from them because of it. He says that there is a real concern among farmers who want to help wildlife but who are afraid that, because they're providing habitat, they risk having that land forced out of production because of more stringent regulations regarding wildlife habitat, even if that habitat was already being provided by the farmer voluntarily.



Hall has not had to deal with any mandates or excessive land-use restrictions himself, but he is all too familiar with the problems that other members of the agriculture community are encounter-

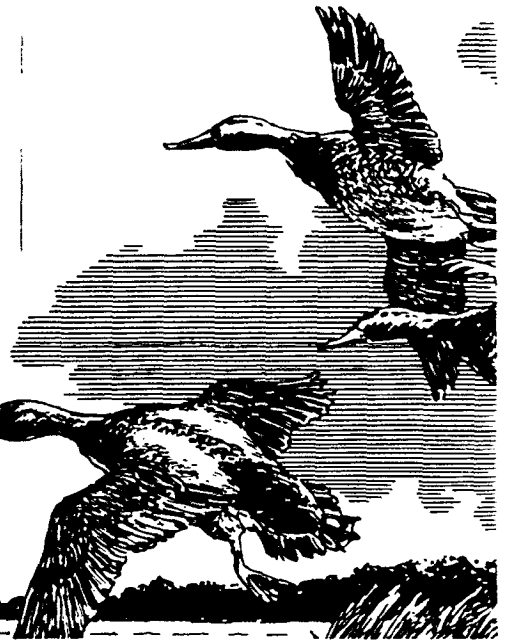
Describing a fallowed nesting field beyond a series of rice checks, Hall says, "that's the kind of thing farmers aren't going to do if they're worried about [excess regulation]."

ing. His observations of such situations have led him to warn that if the government comes into the picture saying, "thanks a lot - you did something great for wildlife, now we're going to take it away," farmers would want to "disc up every ounce of land they have - they can't lose their land!"

Hall also understands that farmers who voluntarily provide habitat for endan-

gered species are afraid that they "could get nailed for a take [under the Endangered Species Act]" of the very species they wanted to protect on their farms. According to Hall, "farmers have the mentality that this is my land, this is my dad's land, this is my grandpa's land" and they want to manage it as they see fit, not according to well-meaning but often harmful regulations. Describing a fallowed nesting field beyond a series of rice checks, Hall says, "that's the kind of thing farmers aren't going to do if they're worried about [excess regulation]."

Individuals like Hall and the people he works with on the Conaway Ranch, as well as corporations and landowners such as PG&E Properties and their partners are voluntarily helping wildlife populations flourish on California farms and ranches. They are motivated by a desire to leave the land better than they found it for their



children, and by their own deep appreciation for wildlife and the outdoors. Thanks to their efforts, California remains a refuge for thousands of species of wildlife, and they will continue in these efforts to see our wildlife populations enjoy sustained success.



Veterinarian/Farmer Lives Out His Appreciation for Wildlife

In 1974, veterinarian John Anderson purchased 50 acres of farmland in Yolo county just north of Winters. Since that time it has developed into the 600 acre Hedgerow Farms, where tomatoes, wheat, corn, safflower, and cotton are grown in addition to 200 acres devoted to more than 20 species of native grasses, sedges, and wildflowers for seed. The farm also includes over 100 acres of marginal soil that is now permanent wildlife habitat. He is a former director of the Yolo County Resource Conservation District, and

"We wanted more game species... [but] it's become very apparent to me that it's more than just game - it's a quality of life."

he works closely with the Natural Resource Conservation Service as well to promote the use of native plants to create wildlife corridors and help control erosion along ditch and canal banks, roadways, field edges, and levees.

Anderson is well known throughout the state for his efforts to establish what he calls "vegetative systems." He has shown by example the beneficial effects of planting trees and native species in non-farmed areas, and especially along waterways. Anderson knows that agriculture is going to have to deal with non-point source pollution, and vegetative systems along waterways have proven "exceptionally effective" at

cleaning water and stemming erosion. The plant roots serve as filters to clean excess nitrogen and chemicals from the water while also holding the soil in place. And, he adds, "once you establish good permanent vegetation... you essentially eliminate weeds." This decreases the need for herbicides used to keep "clean-farmed" levees, ditches, and roadways bare of vegetation.

Wildlife species appreciate Anderson's efforts to establish what he refers to as "corridors of habitat," and over 100 different species can be found on the farm. These include pheasant, quail, dove, turkeys, snakes, lizards, and beneficial insects. Says Anderson, "we have an extraordinary amount of wildlife." The farm is also home to valley longhorn elderberry beetles, a federally listed endangered species, but

"Establishing a diversity of native plant



John Anderson, Yolo County

species on all of the non-farmed areas of a farm" is Anderson's main goal, and he reports that there are several agencies, such as the USDA's Wildlife Habitat Incentives Program, the Fish and Wildlife Service's Partners for Wildlife Program, and the State Fish and Game's Wildlife Conservation Board, that provide incentives to help farmers. Anderson hopes that his efforts will develop awareness of the benefits of native vegetation corridors as well as the means through which they can be established.

Voluntary efforts are the most effective ways to help wildlife, Anderson believes, and he states that, "I think the whole program has to be voluntary in order for it to succeed." Recalls Anderson, "We wanted more game species... [but] it's become very apparent to me that it's more than just game - it's a quality of life."

Working With Others to Re-establish Lost River Habitat

Scott Kemp and his father, Ronald Kemp, have been managing a cow/calf operation on the Kemp Ranch in the Owens Valley region since 1957. Along with a privately-owned piece in the valley itself, the Kemps lease land from both the City of Los Angeles and the Bureau of Land Management (BLM) around the towns of Lone Pine and Independence. The Owens River runs through the Kemp Ranch, and the operation is home to ducks, geese, beavers, raccoons, foxes, coyotes, mountain lions, deer, and a population of 700 to 1,000 tule elk, a species that is unique to the area, according to Kemp.

Kemp and his father have worked with several local environmental groups, including the Sierra Club, in managing their property. Working with these groups and on their own, they have cleared and opened up several spaces on the ranch, gotten water to new areas, and according to Kemp, they've also "done quite a bit of restoration work on mountain streams." Says Kemp, "If you're going to stay in business you've got to manage for everything [including wildlife]." He has noticed the deer population, in particular, is "thriving... mainly due to some of the management that is done." He also reports that, "there's more waterfowl in the valley now than I can remember." This is mostly due to the exceptionally wet year we've had, but it also reflects wise management by the Kemp family and other area ranchers.

In addition to these projects, the Kemps are involved as leaseholders in the

Lower Owens River Project, an effort to re-water the entire Lower Owens River. Kemp explains that around 70 to 80% of Los Angeles' drinking water comes from the Owens Valley. The Kemps will be actively involved in consultation on this project, helping agriculture and the government work together toward a common goal - that of preserving the Owens River and the wildlife that make it their home.

When reflecting on voluntary preservation efforts versus mandating requirements, Kemp comments, "Well, when you're doing something volun-

Says Kemp, "If you're going to stay in business you've got to manage for everything [including wildlife]."

tarily, you're doing it because it needs to be done." Although Kemp says that they haven't had to deal with any "ridiculous" mandates yet, he does not have a problem with mandates that make sense. The problem is, he adds, that the government simply does not follow through when it comes to such things. Says Kemp, "sometimes they'll put in a fence but they'll never maintain a fence - and that's the problem...sometimes it's difficult to work around some of these agencies."



Scott Kemp, Inyo County

Healthy Wildlife Populations Goal of Farm and Hunt Club

Pat Collmer, a member of the California Waterfowl Association, manages the Aloha Farm Company Duck Club just north of Marysville, in Yuba county. The 450 acres are owned by four members of the club, which was established in the 1950's. While 210 acres are put into rice and managed by a local farmer, about 248 acres are set aside and managed as permanent wildlife habitat. This area, according to Collmer, includes 100 acres of semi-permanent marsh and one 148 acre seasonal marsh. While the semi-permanent marsh provides wetland habitat almost year-round, the seasonal marsh is flooded from September through early spring. The areas provide habitat for many

ituted by Collmer. "It's something that interests me," he says. Barn owls also use the wood duck boxes and Collmer notices that swallows build their nests just beneath them. Collmer sees voluntary efforts to help wildlife, like those on the Aloha Farm Company, as much more successful than federally mandated efforts, explaining that, "if you're interested in it you'll probably pay more attention to it than if you're made to do it."

Although he believes that certain government programs can help farmers help wildlife, he doesn't see any sense in excessive regulation and mandates. Collmer, like other farmers, ranchers, and managers throughout the



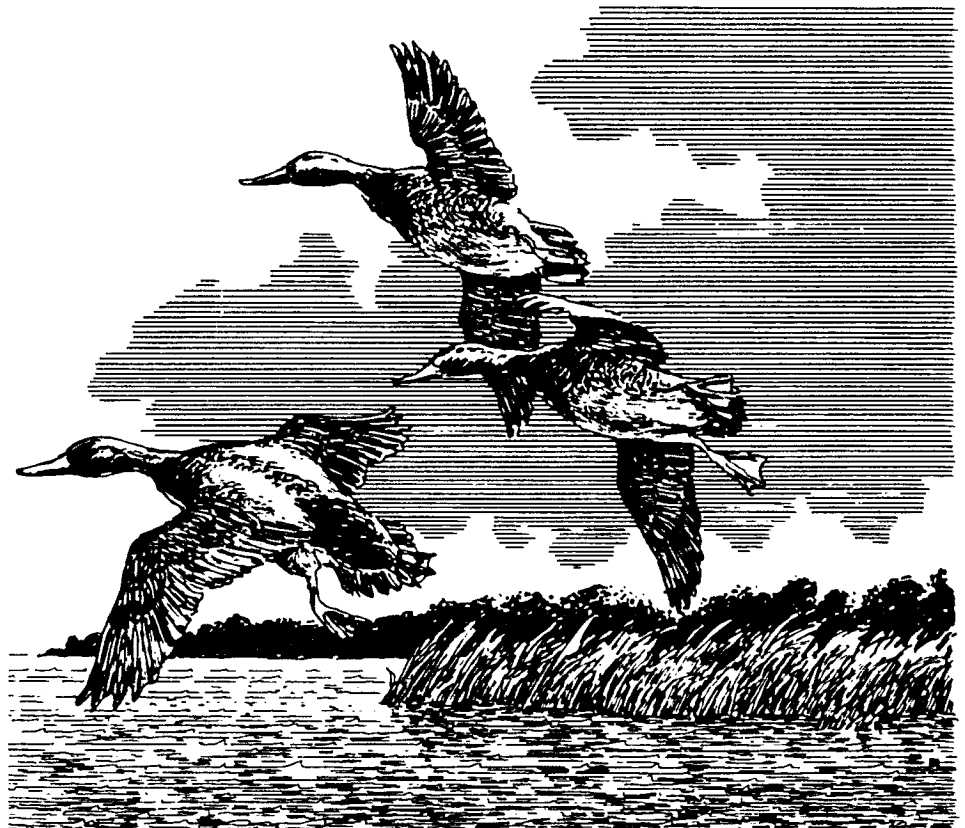
Pat Collmer, Yuba County

state, is simply doing what he loves to do in helping to preserve and promote wildlife.

"If you're interested in it you'll probably pay more attention to it than if you're made to do it."

species of ducks, egrets, yellow-headed, tricolored, and red-winged black-birds, bitterns, killdeer, white-faced ibis, and other shorebirds. Coyotes, pheasant, and many other upland species also use the areas when they are drained.

Wood duck nesting boxes and mallard nesting tubes have been put up around the marshes and Collmer reports that from 1995 through 1997, 406 wood ducks have been hatched on the farm as well as 287 mallard ducklings. The wood ducks are all banded and mon-



Wildlife Appreciation is a Family Tradition

Mike Bryan's great grandfather started ranching in the Scott Valley in 1852, and Bryan is the fourth generation to follow in his footsteps. He runs a 700 acre hay and cow/calf operation in Siskiyou county that provides a home to hawks, quail, doves, ducks, geese, coyotes, squirrels, deer, skunks, beavers, muskrats, and mountain lions. Bryan is also a licensed guide, taking people on wilderness tours about 20 to 30 times a year.

Bryan has developed an appreciation for wildlife that is reflected in his management practices. He has fenced off the riparian zones along the Scott River on his ranch where he practices controlled grazing. This promotes the health of the vegetation along the riv-

Scott has noticed a bit of an increase in the salmon population, but he comments that the fish population increases or declines determined more by weather, offshore fishing, and other factors as opposed to farming practices.

er and provides undisturbed nesting habitat for wildlife. Bryan has also been involved in projects to improve the river banks and has done several plantings both on his own and with the help of government monies. Scott has noticed a bit of an increase in the salmon population, but he comments that the fish population increases or de-

clines determined more by weather, offshore fishing, and other factors as opposed to farming practices.

The idea of federal mandates concerns Bryan, who thinks that voluntary ac-

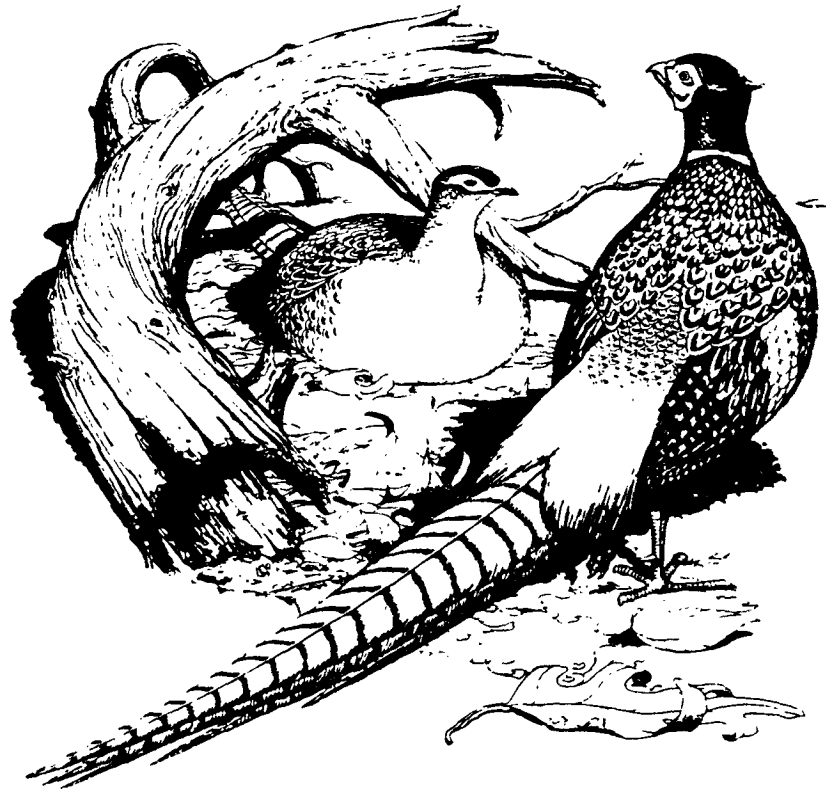
"I enjoy it... I enjoy seeing it [wildlife] and having it around."

tions are the most effective way to preserve and enhance habitat. Although he appreciates incentive programs and suggestions, he believes that that's as far as the government should go. He also adds that many people are so afraid to have endangered species on their property that they would almost



Mike Bryan, Siskiyou County

be inclined to "eradicate" them for fear of increased governmental regulation. But as for Bryan, he will continue in his efforts to promote wildlife and habitat on his property, because as he puts it, "I enjoy it... I enjoy seeing it [wildlife] and having it around."



Full-time Commitment to Habitat Restoration

In 1969 John Kirkpatrick and his wife, Shirley, purchased 50 acres of land in the San Joaquin Valley, northeast of the town of Exeter. The property was purchased just as a Tulare county granite-mining project was being finished there, leaving 11 acres of untillable, rough, rocky land. The Kirkpatricks planted citrus on the tillable ground, and they established their home on a portion of the eleven acres of rough ground, cleaning up the rest and leaving it to fallow. It was not until four years ago, according to Kirkpatrick, when he was "kicking around the rocks," that he noticed a bit of green.

"the way the system works now just does nothing but discourage" farmers and ranchers from harboring endangered species on their property. "We're taking a risk," he says, and "it just doesn't make any sense at all."

In asking around, he discovered that the plant was perennial bunchgrass, which prompted him to think, "there's not much else we can do here... why not see if we can't establish this and things like it?"

Since then, Kirkpatrick and his wife have been involved in efforts to restore native perennial grass and oak tree habitat on their small farm. Kirkpatrick mentions that they know

the area once used to grow oaks trees because a Native American archeological site including bedrock mortars is located on the farm. The mortars were used to crush and roll out acorns. As he describes it, the area is like a "small peninsula of hard rock and decomposed granite" that extends into the citrus groves, and he assumes that the oaks were cut down and used as firewood by the Native Americans who camped there long ago.

The California Department of Forestry (CDF) has been helping the Kirkpatricks manage this acreage by monitoring controlled burns and using them as training exercises. The burns, says Kirkpatrick, serve to "encourage bunchgrass and discourage the annuals" that are not native to the area. Kirkpatrick reports that "we've purchased [and planted] seeds of two varieties [of grasses]... and we've propagated and planted two varieties of oaks" on the grounds. Although he would like to plant elderberry bushes in the area to provide habitat for the endangered valley longhorn elderberry beetle, he is somewhat fearful of the consequences, commenting, "until we get a safe-harbor agreement we don't want to take on the liability" of having an endangered species on the property. For now, though, the area provides habitat for such species as ferruginous, red-tail and red-shoulder hawks, kites, barn and great horned owls, road-runners, quail, dove, coyotes, and high-sierra birds that winter in the milder weather of the valley.

When discussing his desire to establish



John and Shirley Kirkpatrick,
Tulare County

habitat on the property for an endangered species, but his fear to do so, Kirkpatrick remarks, "the way the system works now just does nothing but discourage" farmers and ranchers from harboring endangered species on their property. "We're taking a risk," he says, and "it just doesn't make any sense at all." These concerns are common among farmers and ranchers throughout the state, who would like to promote endangered species populations on their land but who are hesitant to do so, fearing excessive regulation under the Endangered Species Act, or even the possibility of losing rights to their own property.

But for now the Kirkpatricks "think it's kind of fun" to restore native habitat on their farm. They enjoy the "satisfaction of knowing we're doing something worthwhile." Says Kirkpatrick, "we do enjoy our wildlife... we just kind of like to encourage all of this."



Farmer Leads Effort to Preserve Wildlife

Catherine Baranek has been part of the Pierson District of the Sacramento Delta for 25 years, but her husband's family has actually been there since 1902. Her son is the fourth generation to farm on their property near Courtland. Baranek and her husband grow wine grapes, and in 1992 she and other members of the Delta community formed a land trust called the North Delta Conservancy. Through this trust Baranek has been able to grow wildlife along with her grapes. She establishes and maintains wood duck nesting boxes, seasonal wetlands, and wild duck egg rescues.

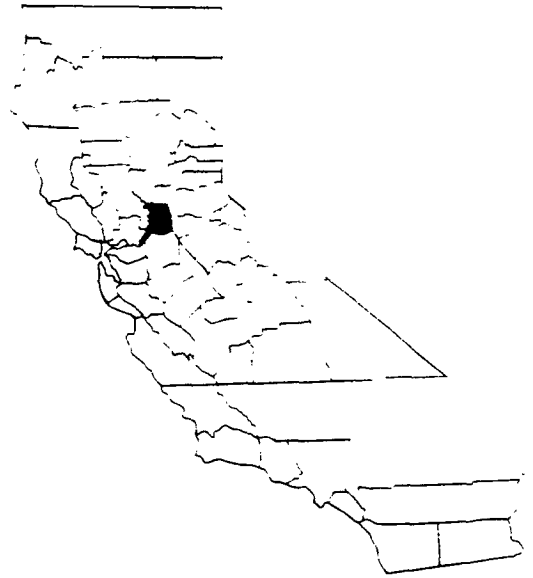
Her goal is to "try to educate landowners about conservation methods, and help them with various types of farming techniques" that will enhance wildlife and habitat without hurting their farming operations.

Baranek reports that the trust has installed 90 wood duck nesting boxes, and through this program she's "seen the wood duck population probably quadruple." The trust also provides boxes, built by local high school students, to other growers around the delta. In addition to this program, Baranek is involved in wild duck egg rescues, in which equipment operators are instructed to stop their equipment when they see a hen fly up in front of them. They check in front of the equipment for nests, and any eggs that are found are collected and taken to Baranek, who hatches and cares for them until they are banded and released in various locations throughout the delta. The project has grown from four

pens to eight, and Baranek now uses four incubators to handle the numbers of eggs she receives. She recalls that the trust released 150 birds the first year of the program, and this year expects to release over 800. "It's a very successful program," she remarks, providing "immediate payback to the environment."

Baranek is also involved in an effort to establish more seasonal wetlands in the area, and she describes a program in which, through the land trust, they are able to lease small sections of marginal land from local farmers to do so. She explains that they use "very flexible contracts" that allow farmers to create wetland habitat on their property without entering into contracts with government agencies, an idea that frightens most farmers. By her more flexible guidelines, farmers are asked to lease their property for at least five years, but they are free at any time to take part of their land back and put it into agricultural production if they need to. Through this program Baranek has been able to create a total of 30 acres of seasonal wetlands. It works to "help farmers do conservation methods... that are more compatible with wildlife," she says, without having to deal with excessive government regulation and red tape.

Blackberry removal and native grass plantings are also endorsed and promoted by Baranek, who explains that blackberries harbor predator species, while native grasses tend to provide crucial nesting cover and feed for upland game birds. Baranek also uses



**Catherine Baranek,
Sacramento County**

buffer strips between her vineyards and waterways to help clean and filter chemicals and excess sulfur from irrigation water before it makes its way back into the delta's waterways. The buffers consist of ditches and tree lines, and according to Baranek, "it's very effective."

"[Proving] that we can do this without the federal government's help or the state government's help" is what motivates Baranek in her conservation efforts. Voluntary measures are "a lot more cost-effective and time-efficient" than mandated or regulated efforts, she says, and they provide an alternative to "not only costly but also restrictive" government programs. But best of all, says Baranek, "it makes for a much nicer farming environment."



Wildlife Preservation a Natural Extension of this Farming Operation

John Ohm's family has been farming since 1918 on a Red Bluff ranch where Ohm's father was born and raised. In addition to the home ranch they acquired another tract of land in 1934, about 7 miles south of Red Bluff in Tehama county. The Ohms' operation includes cattle, alfalfa, row crops, and irrigated pasture as well as large sections of riparian areas along the Sacramento River. According to Ohm, the property is home to many species of wildlife, including pheasants, turkeys, quail, ducks, mountain lions, deer, and coyotes. The ranch is also home to a large family of geese which the Ohm family has been able to watch multiply through the past several years.

The Ohms practice a method of farming that is becoming increasingly popular in California as an alternative to the traditional "clean" farming. Fence lines and field edges are allowed to be covered with vegetation rather than sprayed or mowed. Ohm explains, "we

Ohm is especially proud of the family of geese that reside on his ranch. Several years ago there was only a pair, then it increased to seven, and now there are at least 20. Ohm says, "you can have all the windows shut in the winter and still hear them."

try to maintain as much cover as we can" for quail, pheasant, and the oth-

er wildlife species found on the property. In addition to providing cover, the irrigated pasture on the ranch is filled with clover, a favorite of the geese that live there. The deer enjoy the alfalfa fields and will come up to feed in the evenings.

Ohm is especially proud of the family of geese that reside on his ranch. Several years ago there was only a pair, then it increased to seven, and now there are at least 20. Ohm says, "you can have all the windows shut in the winter and still hear them." While

"Most people in agriculture... do a lot of voluntary stuff and don't even think about [it]."

hundreds of geese migrate through the ranch, this particular family comes back faithfully, year after year. For Ohm, it's a matter of "personal gratification" to see the wildlife flourishing on his property, and he reports that wildlife populations are increasing.

All of the actions Ohm takes to promote wildlife on his property are completely voluntary. He says that, "most people in agriculture... do a lot of voluntary stuff and don't even think about [it]." And as for his family, "the way we feel about it is that it's more personal for us."

Although Ohm feels positive about incentive programs, he believes that voluntary actions to help wildlife are the way to go. He is also optimistic about the idea that voluntary actions like



John Ohm, Tehama County

his own and those of other California farmers and ranchers will help preserve endangered species populations and habitat. And as for now, Ohm does "as much as possible without incentives."



California Waterfowl Association and Farmers Team Up

Harley Graese, a district manager for the California Waterfowl Association (CWA), worked for the Tri Valley Growers, a tomato processing cooperative near Thornton in San Joaquin county, until his retirement in 1996. During the time that he worked there he was involved in starting a wood duck nesting box project on the 160 acres of Tri Valley Growers land. Now that he has retired he has devoted more time and energy to the enterprise. It currently includes 43 wood duck boxes and abundant habitat along the distributing ponds and the Mokelumne River.

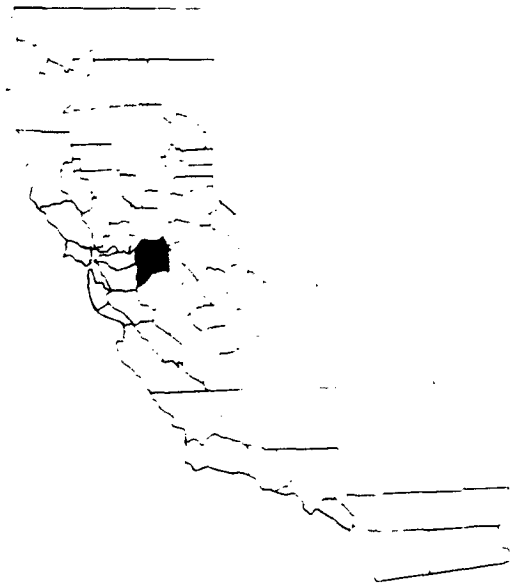
Since the project started in 1988 the ducks have been banded and monitored, and Graese reports that often the hens come back to nest in the same boxes or in the same areas each year. Last year Graese counted 455 hatchings, commenting that many of the nests are even "occupied twice" each year. Many local farmers and landowners like to monitor and maintain their own nesting box projects, but Graese says that "from Lodi to Thornton we have 600 nesting boxes" established and maintained by CWA. He remarks, "we're having a very good turnout on volunteers."

Since the CWA started the wood duck nesting program, Graese reports that they've had over 100,000 hatchings in one year alone. "You have to give the farmers credit because they're the ones who let us on their farms to maintain the projects," says Graese. "they're very cooperative - more and more are letting us

do this." Graese continues to maintain the project, cleaning and preparing the boxes for nesting, keeping records, banding ducks, and monitoring predators. He is motivated to

"You have to give the farmers credit because they're the ones who let us on their farms to maintain the projects," says Graese, "they're very cooperative - more and more are letting us do this."

help wildlife because, as he explains, "I was an avid hunter for years and I just thought it was time to give something back."



Harley Graese, San Joaquin County



Problems Present Opportunities

Tom Ellis' family has been farming in southern Colusa County for over 60 years. Ellis grows various crops near the town of Grimes, but he is especially interested in his alfalfa crop, where he finds ample opportunities to help wildlife. In addition to his own alfalfa, Ellis handles neighbor's hay crops as well, and notes that ducks, geese, pheasants, and jackrabbits love to use the fields for feeding and nesting. He is actively involved in efforts to rescue pheasant and duck eggs, but acknowledges that he's "just a Johnny-come-lately" to the project, crediting men like Roger Moore, the late Pat Murphy, and Charlie Jensen with pioneering the program in his area 30 years ago.

Ellis, through a series of trial-and-error approaches, has developed a mechanism that reaches three feet in front of his hay swather to flush out hens and jackrabbits before the swather blades reach them. As soon as the hens are flushed out, he says, the equipment operator stops the machine and collects any eggs from their nests before continuing. These eggs are then taken to Roger Moore, who incubates and hatches the chicks and ducklings and raises them for several weeks. The growing birds are then taken to Charlie Jensen who continues to care for them until they are mature enough to be released. Through the use of duck bands, these birds have been tracked as far away as Texas, Montana, South Dakota, and Canada.

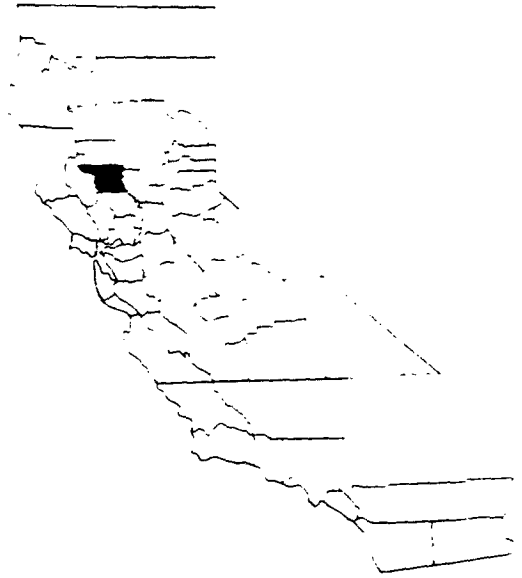
Ellis and other concerned farmers are lobbying equipment manufacturers,

such as New Holland, to develop and offer more advanced flushing equipment on their harvesters. He is hoping that an electronic warning device or something similar could somehow be incorporated into the harvesting equipment, offering opportunities for more farmers to help wildlife. He stresses that it's not just the eggs that are salvaged through the use of slushing mechanisms, but the hens as well. When a hen is flushed from a field before any equipment reaches her, she is given a second chance to nest and raise another brood. So far, he reports, they have met with little success with equipment manufacturers, but they will continue to lobby them until something is developed.

Ellis is opposed to the idea of federal mandates, opting for the use of voluntary efforts like his to help wildlife. Says Ellis, "we don't need federal man-

When a hen is flushed from a field before any equipment reaches her, she is given a second chance to nest and raise another brood.

dates...we don't need the federal government telling us what to do. We ought to be able to do it ourselves." He helps wildlife simply because he noticed a problem and wanted to fix it, explaining, "I've witnessed this [nest disturbance]...and felt it was a problem." He believes that if farmers continue to work together, and especially



Tom Ellis, Colusa County

if they are able to get equipment manufacturers interested, "we really could make a difference." But for thousands of pheasants and ducks, Ellis already has.

Holistic Resource Management Helps Manage for Healthy Land

Stan Hunewill is continuing a ranching tradition started by his great-grandfather in 1861. The ranch is located near Bridgeport in Mono county, and since the 1930's has been a dude ranch as well as an outside cattle operation. Running the dude ranch has given Hunewill a little more insight into the "environmentalists' thinking," as many of the visitors to the ranch are members of environmental groups such as the Sierra Club. Some of the wildlife that the visitors come to see include bears, deer, ducks, geese, coyotes, badgers, skunks, beavers, wolverines, and racoons. In fact, Hunewill recalls the scramble for cameras and camcorders by the visitors as a bear recently came down from the hills and ran right through the compound where they were staying, giving them an even closer look at the wildlife on the Hunewills' ranch.

For the last several years the Hunewills have practiced what is known as HRM, or Holistic Resource Management, "a philosophy and program that deals with grazing and land management practices. They are excited about the success of HRM on their ranch, and says Hunewill, "it's gratifying to see it really work on the land... it does make a difference." Using the HRM model, the Hunewills have put up fencing that allows them to selectively graze their cattle. They use their cows to keep the riparian areas along the East Walker River and Robinson Creek healthy while at the same time they are able to keep them away from duck habitat during nesting season. According to

Hunewill, "you can graze a lot of these areas if you manage it properly."

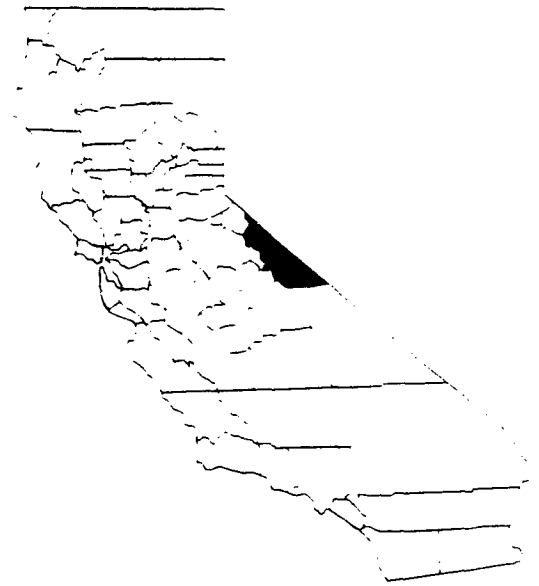
Hunewill is concerned with regulations and government mandates. He believes that "there's a trend with federal mandates... [the government says] you're not a good manager and we'll help you do it right... that kind of irritates a lot of folks." He understands that "few people know the land as well as the people who've lived on it for several generations... who've seen what works and what doesn't." But Hunewill says that it's equally important to "be open to new ideas and new practices."

While "it should be obvious when you're feeding your family off the land

"Few people know the land as well as the people who've lived on it for several generations... who've seen what works and what doesn't."

that you're not going to exploit it." Hunewill maintains that he wants "to work with the [government] agencies on a win-win basis, but when you're working with the government, that's not always easy because you're not on a level playing field." However, Hunewill's main concern is caring for wildlife and the land. He knows that "there's nothing to be gained by being an antagonist."

One of the questions the Hunewills ask themselves before making management decisions is, "is it socially, economi-



Stan Hunewill, Mono County

cally, and environmentally sound?" This attitude guides them in their management practices and says Hunewill, "we like to see everything living harmoniously and prosperously," and he's careful to explain that that's not just a "warm fuzzy feeling." He says that it requires constant monitoring and the assumption that you're not always right.

What it comes down to for Hunewill and his family is simply the fact that "we feel lucky to get to live here," and their family will continue to care for wildlife and the land as they have since their great-grandfather started it in 1861.

EXHIBIT F

C-096845

DRAFT

**PRELIMINARY DRAFT
FOR DISCUSSION PURPOSES ONLY**

**CALFED BAY-DELTA PROGRAM
MULTI-SPECIES CONSERVATION STRATEGY**

**Proposed Assurances for Cooperating Landowners,
Local Agencies, and Other Private Interests**

It is anticipated that CALFED will establish some type of governance structure and an assured revenue stream to fund ecosystem restoration and conservation activities in future years. A multi-species conservation strategy is critical to the successful governance and financing of conservation and restoration activities. The following outlines a suggested assurances program to be included in the Record of Decision and any other documents approving the Program for the landowners, public agencies and other private organizations whose active participation and collaboration with CALFED will be essential for the success of a multi-species conservation strategy. The assurances program provides the critical avenue through which ecosystem conservation and restoration can occur in harmony with the needs of landowners, counties, local agencies, and other private interests.

1. *General Conservation Program.* These assurances would apply to landowners who allow restoration projects on their lands, who own/farm lands that are within a reasonable radius (depending on species) of a wildlife refuge or restoration project, or who are within a watershed that is being restored (e.g., Battle Creek). These assurances would apply to local public agencies (typically special districts, but could include counties or cities) with restoration projects within their boundaries or located where those restoration activities could affect the operations of the local public agency. Finally, the assurances would also apply to mutual water companies or other private organizations (generally referred to as "other private interests") that wish to participate in conservation or restoration activities or whose operations might be affected by such activities.
 - a. *Assurances to Landowners/Local Public Agencies/Other Private Interests.*
 - i. *Voluntary Participation.* Participation in the CALFED Bay-Delta Program shall be strictly voluntary. Landowners, local public agencies or other private interests may withdraw at any time and shall not suffer any

penalty or disincentive for withdrawing from the Program. Withdrawing landowners, local public agencies, or other private interests shall not be required to mitigate for their withdrawal or be deemed to have taken members of a covered species as a result of their withdrawal from the Program.

- ii. ***Incremental Costs Borne by CALFED.*** The incremental costs to a landowner, local public agency, or other private interest of participating in CALFED activities shall be borne by CALFED agencies. Incremental costs will be defined by comparing expenditures by the landowner, local public agency, or other private interest prior to a decision to participate in CALFED activities with the expenditures by the landowner, local public agency, or other private interest after a decision to participate in CALFED activities. Incremental costs are not to be based, in any way, on a concept of forcing a landowner, local public agency, or other private interest to pay for past habitat degradation.
- iii. ***Private Property Rights.*** All parties will fully respect private property rights of landowners. CALFED personnel will not enter upon private lands without the express permission of the landowner or manager, save in cases of bona fide emergencies.
- iv. ***Confidentiality.*** All information provided by a landowner relating to the implementation of the Program will be kept strictly confidential and shall not be subject to disclosure under either the Freedom of Information Act or the Public Records Act. To the extent that appropriate exemptions under either statute do not extend to information provided by landowners to CALFED agencies, CALFED and its member agencies agree to use their best efforts to seek legislation that would enact such exemptions. In addition, waiver of this right to confidentiality shall not be a condition for landowners to participate in the Program.
- v. ***Right to Farm.*** Landowners participating in the Program (and their neighbors) will be able to modify their cultural practices (including changing cropping patterns) freely, as long as they are engaged in routine and ongoing agricultural activities. For purposes of the CALFED program, "routine and ongoing agricultural activities" shall include all activities undertaken on a farm or ranch for the purposes of producing any plant or animal product for commercial purposes, the use of land for open space or passive recreational purposes, or the idling of land for conservation or other similar purposes.
- vi. ***Monitoring.*** Monitoring and site-specific surveys of the results of the Program will occur in the manner that is least intrusive to the landowner in

question. The landowner, local public agency, or other private interest may undertake self-reporting of progress, may retain his/her own biologists to perform such work, may permit agency personnel to conduct monitoring or site-specific surveys, or may work with the agencies to develop a reasonable monitoring program or site-specific surveys.

- vii. ***Incidental Take Authorization.*** Landowners, local public agencies, or other private interests participating in the Program (and their neighbors) will be given incidental take authority under section 10 of the federal Endangered Species Act for the incidental or accidental take of covered species, provided that the take is the result of routine and ongoing agricultural activities or results from inadvertent or ordinary negligent acts that occur on a farm or ranch in the course of routine and ongoing agricultural activities. In the case of local public agencies or other private interests, incidental take authority will extend to the routine and ongoing activities of that agency or company
- viii. ***Liability Protection.*** CALFED and/or its member agencies agree to indemnify, defend, and hold landowners, local public agencies, and other private interests harmless for any losses that may occur as a result of a landowner, local public agency, or other private interest allowing restoration activities on private or agency property.
- ix. ***In-Lieu Fees.*** CALFED and its member agencies recognize that local governments depend upon property taxes, special assessments, property fees, and other similar financing mechanisms to provide operating revenues. In connection with any lands that are acquired for restoration purposes, CALFED and its member agencies agree to pay in-lieu fees to local public agencies (including cities, counties and special districts) that are equal to the payments made by the private landowner prior to public acquisition.
- x. ***No Criminal or Civil Penalties.*** CALFED, its member agencies, and the United States and the State of California all agree that they will not seek criminal or civil remedies against participating landowners (or their neighbors), local public agencies, or other private interests for routine and ongoing agricultural activities (as described above) or activities that are authorized by the Program or for local public agencies or other private interests' routine and ongoing activities. Such activities would include, but are not limited to, the routine operation and maintenance of levees and other flood protection facilities and the construction, operation and maintenance of fish screens, weirs, or other similar facilities intended to protect or enhance aquatic species.

- xi. ***Net Conservation Benefit.*** CALFED and its member agencies recognize that it is important to offer landowners, local public agencies, and other private interests incentives to participate fully and actively in the restoration activities proposed by CALFED. To this end, landowners, local public agencies, and other private interests participating with CALFED will not be subject to the typical mitigation requirements established under the federal or California endangered species acts for impacts on listed species. Instead, as long as these parties' projects result in a net conservation benefit, these parties will not be subject to the typical mitigation requirements. Net conservation benefits include, but are not limited to, the reduction of habitat fragmentation rates; the maintenance, restoration, or enhancement of habitats; an increase in habitat connectivity; the maintenance or increase of population numbers or distribution; the reduction of the effects of catastrophic events; the establishment of buffers for protected areas; and the establishment of areas to test and develop new and innovative conservation strategies. The determination of net conservation benefit shall be made based on the best available scientific and commercial information by technical advisory committees composed of biologists representing landowners, private organizations, and local, state and federal agencies. Net conservation benefits include circumstances where a proposed project has minor adverse impacts on one or more species but has significant beneficial impacts on one or more other species.

For instance, suppose District X wishes to construct a fish screen. As part of that project, it will take a certain number of other listed or candidate species. If the net conservation benefits – taken as a whole – of screening exceed the losses of other listed or candidate species, the District will not need to engage in any mitigation for the construction of the fish screen. Or, suppose that an agency wishes to build a number of small flood control facilities that will take listed or candidate species in conjunction with the construction of new riparian or wetlands habitat. Finally, suppose that the construction of small flood control facilities mentioned above would have minor impacts on a number of listed or candidate species but the habitat creation would provide significant benefits to other listed or candidate species. As long as the proposed program – taken as a whole – yields a net conservation benefit, the program will not need to mitigate for its acknowledged adverse impacts on certain listed or candidate species.

- xii. ***Other Permits and Activities.*** CALFED and its member agencies recognize that they issue a large number of permits that regulate the activities of individuals, public agencies or mutual water companies. For instance (and without limitation), CALFED agencies issue permits under section 10 of the Rivers and Harbors Act, sections 401 and 404 of the

Clean Water Act, the California Endangered Species Act, and sections 1601 and 1603 of the California Fish and Game Code. Each of these permits that is issued in connection with activities intended to implement the CALFED Bay-Delta Program will incorporate all of the assurances contained in this policy. In addition, CALFED and its member agencies are engaged in a wide variety of other activities that are intended to assist in implementing the conservation strategy (e.g., activities implementing the Central Valley Project Improvement Act). These activities will also be carried out in a manner consistent with this assurances policy.

b. *Assurances to CALFED Agencies.*

- i. *Landowners.* Participating landowners will not interfere with restoration activities on their lands or on neighboring lands. Landowners will, to the extent reasonably practicable and consistent with their other use(s) of their property, facilitate restoration activities on their lands.
- ii. *Local Public Agencies and Other Private Interests.* Participating local public agencies and other private interests will not interfere with restoration activities within their jurisdiction. Local public agencies and other private interests will, to the extent reasonably practicable and consistent with their other activities, facilitate restoration activities on lands within their jurisdiction.

2. *Special Assurances for Levee Maintenance and Repair.* These special assurances would apply to individuals and local flood control districts (reclamation districts, levee districts, special act districts, and others) that operate and maintain flood control works. These assurances would also apply to the State of California when it undertakes to operate or maintain levees in the Central Valley. These assurances refine the general discussion of assurances that would apply to all CALFED activities.

a. *Assurances to Flood Control Districts.*

- i. *Incremental Costs Borne by CALFED.* The incremental costs to an individual or local public agency of levee maintenance and repair activities shall be borne by CALFED agencies, as described above.
- ii. *Liability Protection.* CALFED and/or its member agencies agree to indemnify, defend, and hold individuals and local public agencies harmless for any losses that may occur as a result of an individual or local public agency allowing restoration activities. This indemnification would include, but would not be limited to: (1) recreational activities (e.g., waterskiers or jet skis), (2) impacts on channel capacity or channel

roughness, (3) erosion due to plantings.

- iii. ***Priority of Flood Control Activities.*** Individuals and local public agencies with responsibility for flood protection will be able to engage in all activities necessary for the proper operation and maintenance of flood control facilities and so will fulfill their responsibilities to protect public safety.
- iv. ***Incidental Take Authorization.*** Individuals and local public agencies participating in the Program will be given incidental take authority under section 10 for the incidental or accidental take of covered species, provided that the take is the result of the routine and ongoing activities of that agency. Authorized practices for flood protection will be specified in a revision of the Corps of Engineers' operation and maintenance manual.
- v. ***Net Conservation Benefit.*** Projects proposed by individuals and flood control districts would be evaluated under the net conservation benefit principles described above. For instance, a district proposing to widen its levee in conjunction with the creation of shaded riverine aquatic habitat would qualify for the net conservation benefit principle.
- b. ***Assurances to CALFED Agencies.*** Participating individuals and local public agencies will not interfere with restoration activities within their jurisdiction. Individuals and local public agencies will, to the extent reasonably practicable and consistent with their other activities, facilitate restoration activities on lands within their jurisdiction.

3. ***Special Assurances for Fish Screen Program.***

These special assurances would apply to water diverters who might install fish screens to protect listed species in the Central Valley and Delta. These assurances refine the general discussion of assurances that would apply to all CALFED activities.

- a. ***Assurances to Diverters.***
 - i. ***No Change in Diversions.*** Diverters participating in the Program will not be required to change the magnitude, location or timing of diversions. The construction of a fish screen shall be accomplished in the manner that minimizes impacts on the diverter. CALFED will, if necessary, construct temporary diversion works.
 - ii. ***No Surprises.*** In the event that changes may be required in the fish screen after construction due to new listed species or new information about

covered species, the diverter shall be protected under the "no surprises" policy.

- iii. ***Incidental Take Authorization.*** Diversers participating in the Program will be given incidental take authority under section 10 of the federal Endangered Species Act and under the California Endangered Species Act for the incidental or accidental take of covered species, provided that the take is the result of the routine and ongoing activities of that diverter.
- iv. ***Incremental Costs Borne by CALFED.*** The incremental costs to a diverter from the fish screening program shall be borne by CALFED agencies.
- v. ***Net Conservation Benefit.*** The net conservation benefit principle would apply to fish screening projects in the manner described above in the context of the general conservation program.
- vi. ***Liability Protection.*** CALFED and/or its member agencies agree to indemnify, defend, and hold the diverter harmless for any losses that may occur as a result of the diverter agreeing to participate in the Program.

b. ***Assurances to CALFED Agencies.***

- i. ***Agreement to Screen Diversions.*** At such time as CALFED deems appropriate, CALFED will undertake to screen the diversion at its own cost.
- ii. ***Participation in Screening.*** Diversers will, to the extent reasonably practicable and consistent with their other activities, facilitate screening activities on lands within their service area.

4. ***Implementation.*** The assurances program will be implemented by a series of implementing agreements. These agreements may be of two types: programmatic agreements between CALFED and local public agencies or specific agreements between CALFED and individual landowners. In the case of programmatic agreements, it would be anticipated that the local public agency would then enter into subagreements with individual landowners. Implementing agreements would be entered into under the authority of the "no surprises" policy and "safe harbors" draft policy, as well as the federal government's general conservation authority under section 10(a).

In order to facilitate implementation of the CALFED program and simultaneously protect local interests, CALFED should establish local advisory bodies composed of specified representatives of local, state and federal agencies, water suppliers, landowners, and other interested parties. These local advisory bodies would be appointed by county boards of

supervisors and would function in the same manner as the SB 1086 Sacramento River Advisory Council.